

**FINNISH ANTI-MONEY LAUNDERING
REGULATION EFFECTIVENESS AND IMPACT
ASSESSMENT**

**Jyväskylä University
School of Business and Economics**

Master's Thesis

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ABSTRACT

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Title Finnish Anti-money laundering regulation effectiveness and impact assessment	
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Abstract <p>Money laundering activities are known to take place globally on a very large scale, which increases the need for assessing the effectiveness of existing anti-money laundering systems. The thesis aims to examine the effectiveness of Finnish anti-money laundering regulation and possible improvements to impact assessment. The main purpose is to find out whether the current anti-money laundering actions are cost-effective. Research on the possible use of formalized cost-benefit analysis for Finnish anti-money laundering governmental proposals is another main aspect of the thesis. For a more comprehensive review, we also accessed and analysed data in a comparative manner from other Nordic countries, including Sweden, Norway, and Denmark.</p> <p>The thesis reviews the theoretical framework for criminal economics of money laundering in order to show how the money laundering process model could guide further work on regulative and legislative impact assessment. Further by reviewing several proposals to the use of cost-benefit analysis, we provide further guidance on how to adapt impact assessment to a particular legislative context. Our analysis of data about suspicious reports, sentences related to money laundering, and assets seized and frozen, from the earlier mentioned countries, shows that there has been a clear change in the frequency of the suspicious reports over time. The results further indicate that the number of Finnish suspicious reports is considerably higher than in the other compared countries, while the turnover rate of suspicious reports to sentences is consistently smaller in Finland. The presented impact assessment framework shows possible future use cases of the cost-benefit analysis for Finnish anti-money laundering governmental proposals. We also discuss the role of a cost-benefit analysis as an important addition to the existing procedures for impact assessments of legislative work. We thus anticipate that the research presented in this thesis can be useful for the Finnish Finance Ministry's unit for prevention of money laundering and terrorism financing, for future reviews on their actions and improving their impact assessment.</p>	
Key words Money laundering, anti-money laundering, legislation, impact assessment, cost-effectiveness, cost-benefit analysis, criminal economics	
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TIIVISTELMÄ

Tekijä Beatrice Corander	
Työn nimi Suomen rahanpesun vastaisen sääntelyn tehokkuus ja vaikutusten arviointi	
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<p>Rahanpesutoimintaa tapahtuu maailmanlaajuisesti laajassa mittakaavassa, mikä lisää tarvetta arvioida nykyisten rahanpesun torjuntajärjestelmien tehokkuutta. Tämän Pro Gradu -tutkielman tavoitteena on tarkastella Suomen rahanpesun ehkäisyn sääntelyn tehokkuutta ja mahdollisia parannuksia vaikutustenarviointiin. Päättörajoituksena on selvittää, ovatko nykyiset rahanpesun vastaiset toimet kustannustehokkaita. Toisena Pro Gradu -tutkielman keskeisenä aiheena on tutkia formalisoidun kustannus-hyötyanalyysin implementointia Suomen rahanpesun estämisen hallitusesityksissä. Kattavampaa katsausta varten käytimme ja analysoimme vertailevasti tietoja muista Pohjoismaista, mukaan lukien Ruotsista, Norjasta ja Tanskasta.</p> <p>Pro Gradu -tutkielmassa tarkastellaan rahanpesun rikostaloustieteen teoreettista viitekehystä, jotta voidaan osoittaa kuinka rahanpesun prosessimalli voisi ohjata jatkotyötä säästöjen ja lainsäädännöllisten vaikutusten arvioinnin parissa. Tarkastelemalla useita kustannus-hyötyanalyysin käyttöä koskevia ehdotuksia annamme lisäohjeita vaikutustenarvioinnin mukauttamiseen tiettyyn lainsäädäntöön.</p> <p>Aiemmin mainituista maista peräisin olevien epäilyttävien ilmoitusten, rahanpesuun liittyvien tuomioiden ja takavarikoitujen ja jäädytettyjen varojen analysointi osoittaa, että epäilyttävien ilmoitusten esiintymistiheydessä on tapahtunut selkeä muutos ajan myötä. Tulokset osoittavat tämän lisäksi, että suomalaisten epäilyttäviä ilmoituksia on huomattavasti enemmän kuin muissa vertailumaissa, kun taas tuomioihin johtava osuus epäilyttävistä ilmoituksista on Suomessa jatkuvasti pienempi.</p> <p>Esitetty vaikutustenarvioinnin viitekehys esittää kustannus-hyötyanalyysin mahdollisia tulevaisuuden käyttötapoja Suomen rahanpesun estämisen hallitusehdotuksissa. Keskustelemme myös kustannus-hyötyanalyysin roolista tärkeänä lisäyksenä olemassa oleviin lainsäädäntötyön vaikutustenarviointimenetelyihin. Näin ollen odotamme, että tässä Pro Gradu -tutkielmassa esitetyistä tutkimustuloksista voi olla hyötyä Valtiovarainministeriön rahanpesun ja terrorismin rahoituksen estämisenyksikölle, toiminnan arvioinnissa ja vaikutusarvioinnin parantamisessa.</p>	
Asiasanat Rahanpesu, rahanpesunestäminen, lainsäädäntö, vaikutustenarviointi, kustannustehokkuus, kustannus-hyötyanalyysi, rikostaloustiede	
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CONTENTS

ABSTRACT

TIIVISTELMÄ (ABSTRACT IN FINNISH)

LIST OF TABLES AND FIGURES

LIST OF ABBREVIATIONS

1	INTRODUCTION	9
1.1	Motivation.....	9
1.2	Research questions	10
1.3	Definitions.....	11
1.4	Demarcation	12
1.5	Thesis structure	13
2	THEORETICAL FRAMEWORK	14
2.1	FATF	14
2.1.1	Methodology, Guidance, and Recommendations.....	15
2.1.2	Country mutual evaluations.....	17
2.2	Legislation.....	21
2.3	Prevention of money laundering and terrorism financing.....	23
2.4	Criminal economics in money laundering.....	25
2.5	Cost-Benefit Analysis	27
2.6	Legislative impact assessment	38
3	LITERATURE REVIEW	42
3.1	Impact and Effectiveness	46
3.2	Cost-benefit analysis in anti-money laundering regulations	49
4	DATA AND METHODOLOGY	51
4.1	Data Description	51
4.1.1	Suspicious activity reports.....	52
4.1.2	Sentences in relation to Money laundering.....	55
4.1.3	Frozen and Seized assets.....	61
4.2	Statistical tests	70
4.3	Methodology	72
5	RESULTS	73
5.1	Effectiveness of AML	73
5.2	Impact assessment framework	75
6	CONCLUSIONS	78
	REFERENCES.....	81
	APPENDIX 1: DATA SETS	87

LIST OF TABLES AND FIGURES

TABLES

Table 1 Technical compliance ratings based on FATF (2024d)	20
Table 2 Effectiveness ratings based on FATF (2024d)	21
Table 3 Costs of AML/CFT policy based on Unger et al. (2013)	29
Table 4 Benefits of AML/CFT policy based on Unger et al. (2013).....	29
Table 5 Establishment and ongoing costs survey entities based on Deloitte (2016) 31	
Table 6 Costs of compliance requirements categorization based on Deloitte (2016) 32	
Table 7 AML/CFT Benefits based on Deloitte (2016).....	33
Table 8 AML/CFT CBA based on Ministry of Justice (2017)	34
Table 9 AML/CFT impact summary based on Ministry of Justice (2017)	35
Table 10 CBA based on Sproat (2007)	36
Table 11 CBA based on Harvey (2004)	37
Table 12 CBA based on Financial Conduct Authority (2024).....	38
Table 13 Research articles listed with main findings and results	42
Table 14 Turnover rate of SR's to Sentences	69
Table 15 Turnover rates in Finland	70
Table 16 SRs numbers per country and year	87
Table 17 Money Laundering Sentences in Finland 2018-2022.....	87
Table 18 Money laundering imputable offenses in Finland 2018-2022.....	88
Table 19 ML offences known and solved in Finland 2006-2022	88
Table 20 Money laundering sentences in Sweden 2018-2022.....	89
Table 21 Money laundering sentences in Norway	89
Table 22 Money laundering sentences in Denmark 2019-2022	89
Table 23 ML frozen and seized assets in Finland.....	89
Table 24 ML frozen assets and frozen and seizure orders in Sweden	90
Table 25 ML frozen and seized assets in Norway.....	90

FIGURES

Figure 1 The money laundering process based on Masciandaro (1999).....	25
Figure 2 Possible decisions and utilities of the resulting outcomes based on Masciandaro (2007).....	26
Figure 3 SRs for Sweden, Norway, and Denmark, Finland	55
Figure 4 SRs for 2021-2022 in Finland, Sweden, Norway, and Denmark	55
Figure 5 Money laundering sentences in Finland 2018-2022.....	56
Figure 6 ML offences known and solved in Finland 2013-2022.....	57
Figure 7 ML sentences and imputable offences in Finland	58
Figure 8 Sentences relating to money laundering in Sweden for 2015-2022.....	59
Figure 9 Sentences relating to money laundering in Norway for 2015-2022.....	60
Figure 10 Money laundering sentences in Denmark.....	60
Figure 11 ML sentences in Finland, Sweden, Norway, and Denmark	61
Figure 12 Frozen and seized assets relating to money laundering in Finland ..	62
Figure 13 Asset freezing orders relating to money laundering in Finland	62

Figure 14 Frozen assets average per number of freezing orders in Finland.....	63
Figure 15 ML frozen assets in Sweden	64
Figure 16 Number of ML freezing orders in Sweden.....	64
Figure 17 ML frozen assets and number of freezing orders in Sweden	65
Figure 18 Number of ML asset seizure orders in Sweden.....	65
Figure 19 Amount of seized assets in NOK 2020-2022 in Norway	66
Figure 20 SR's and Sentences in Finland between 2015-2022.....	67
Figure 21 SRs 2015-2020 and Sentences 2015-2022 in Finland	67
Figure 22 SRs and Sentences in Sweden between 2015-2022	68
Figure 23 SRs and Sentences in Norway between 2015-2022.....	68
Figure 24 SRs and Sentences in Denmark between 2016-2022.....	69
Figure 25 Timeseries of offences known	71
Figure 26 Timeseries offences solved	71

LIST OF ABBREVIATIONS

AML	Anti-money laundering
BCR	Benefit cost ratio
CBA	Cost-Benefit Analysis
CFT	Combating the financing of terrorism/combating terrorist financing
EEA	European Economic Area
EU	European Union
FATF	Financial Action Task Force
FIU	Financial Intelligence Unit
GDP	Gross domestic product
HE	Hallituksen esitys (governmental proposal)
KYC	Know your customer
ML	Money laundering
N/A	Not available
SAR	Suspicious activity report
SBT	Suspicious business transactions
STR	Suspicious transaction report

1 INTRODUCTION

This master's thesis considers the world of money laundering and terrorism financing, and how the impact of relevant legislation to prevent these activities can be investigated in a quantitative manner. In general, legislative bodies need to have a clear understanding of how well-functioning their legislative measures are and whether any changes to them are expected to have an improved impact. It is thus vital to know the cost-effectiveness of legislation for future development, as well as being able to create a comprehensive impact assessment framework for legislative changes. These aims apply generally to most legislative work but are particularly relevant for prevention of money laundering due to its negative impact on society and the uncertainties associated with both the extent to which money is laundered in the first place and what legislative measures do actually have an impact on it.

1.1 Motivation

The timeliness and urgency of the thesis topic can be clearly seen from the global scale of money laundering and terrorism financing activities, which according to the United Nations¹ report equal in one year between 2 % and 5 % of the global GDP. This brings a strong motivation to perform research on the effectiveness of current systems. The seriousness of these activities are also highlighted in the Europol (2022) in Brief, where it is mentioned that the most crucial types of crimes for law enforcement are financial and economic crimes. Money laundering has effects on the economy, as Hendriyetty and Grewal (2017) state, are there major impacts on macroeconomic stabilization e.g. by tax evasion, a predicate offence of money laundering, when taxes are a major part of a government's revenue.

¹ United Nations. Money Laundering. Office on Drugs and Crime. Retrieved September 2, 2023, from <https://www.unodc.org/unodc/en/money-laundering/overview.html>

The main focus of this thesis is to investigate the current state of anti-money laundering and terrorism financing regulations effectiveness, and to further try to establish if the legislative changes are only expensive and ineffective, as Hyttinen (2021) wrote in the opinion column in the Helsingin Sanomat newspaper. The topic of the thesis was suggested by the Finnish Ministry of Finance's money laundering and terrorism financing prevention unit while the author was doing an internship there during the summer of 2023, and thesis has been conducted in collaboration with the unit through receiving comments during the thesis process. The unit coordinator presented the idea as a research topic which would be valuable for them for future legislative work since a need has been indicated for the assessment on the impact of the Finnish anti-money laundering and terrorism financing regulations, and whether they are effective in practice. The Finnish Council of Regulatory Impact Analysis (Valtioneuvoston kanslia 2021) has also commented that the impact assessment should clearly be improved. It is obviously important that the anti-money laundering and prevention of terrorism financing legislation has an actual impact on these activities otherwise it may have a negative impact on societies and their financial systems on a larger scale, which will be further discussed in this thesis.

The main motivation for the writer of the thesis topic is regarding the fight against money laundering and terrorist financing, and the effectiveness of legislative efforts as part of this fight. The interest of combining the research into the effectiveness of the current efforts and being able to provide possible future tools to be used in impact assessments is the main drivers of the thesis. Adding to the research and discussion on the topic of money laundering and being able to contribute to the knowledge on the broad issue of money laundering.

1.2 Research questions

As money launderers and financiers of terrorism change their methods, should legislators, investigative bodies and supervisory authorities be able to take such changes into account. While the legislation should be cost-effective and have a measurable impact on preventing the criminal activities, the true extent of these criminal activities remains nearly always hidden, making it difficult to measure it and quantify the effect that any change in legislation might have could be seen as some of the main challenges. There is nevertheless a clear need to critically reflect on the existing legislation and try to assess if any changes were predicted to have desired effects. Since money laundering and terrorism financing is a threat to the Finnish monetary system, and even on the monetary system at large, the matter should not be ignored despite the difficulties mentioned above. A strong incentive to revise current legal and investigative processes in order to achieve an improvement should be put in place if the current measures are assessed to not be cost-effective and have a sufficient impact on preventing criminal activity.

The research questions considered in the thesis are as follows:

1. Are current anti-money laundering and terrorism financing regulations a cost-effective method for combating money laundering and terrorism financing?
2. Have there been changes in the frequency of suspicious reports (SRs) over time across the Nordic countries?
3. How to use the cost-benefit analysis to improve the Finnish impact assessment?

The data and methods used in the thesis will be further presented and discussed in chapter 4.

1.3 Definitions

To be able to formally consider the main concepts, that is legislative impact on money laundering and terrorism financing, we need to first define what money laundering and terrorism financing are and how the processes work. To start, we will shortly discuss money laundering, which can be explained as the processes where money obtained through illegal activities is circulated through legal payment channels with the aim of making the money seem legal, and thus conceal the actual nature, origin, or its owners according to rahanpesu.fi². The nature of terrorism financing is acquiring or collecting money, which can be legal money or illegal money, for the purpose of financing terrorist activity². Money laundering is often connected to other criminal activity, and thus through the prevention of money laundering is it also possible to prevent such activities. Money laundering does also generally negatively impact countries and their financial systems, since it can threaten their stability and reliability, as well as their competitiveness. This can thus increase costs for loans, payment transactions and insurance, making the financial system less efficient³. Money laundering requires a predicate offense, which terrorism financing doesn't, and the predicate offense is usually related to narcotics, theft, fraud, or financial crimes domestically or even internationally according to rahanpesu.fi³.

Financing of terrorism creates prerequisites for terrorist activity, and by supporting terrorism groups and terrorists financially they can maintain, and in the worst case further promote terrorist activities. Through the financing are the terrorists able to prepare terrorist crimes, organize training and recruiting, and finance travels with the purpose of supporting terrorist crimes⁴. Through the prevention of terrorism financing, can networks or people operating for terrorism purposes be identified, which helps to prevent and expose further terrorist crimes⁴, and thus can it be clearly argued that the prevention of terrorism

² [Rahanpesu.fi](https://rahanpesu.fi). Rahanpesu ja terrorismin rahoittaminen – mistä on kyse? Retrieved October 2, 2023, from <https://rahanpesu.fi/mista-on-kyse>

³ [Rahanpesu.fi](https://rahanpesu.fi). Rahanpesu. Retrieved October 9, 2023, from <https://rahanpesu.fi/rahanpesu>

⁴ [Rahanpesu.fi](https://rahanpesu.fi). Terrorismin rahoittaminen. Retrieved October 9, 2023, from <https://rahanpesu.fi/terrorismin-rahoittaminen>

financing is important. International networks are generally active in terrorism financing, and thus international cooperation of preventive actions is extremely important. People sending money to conflict areas to support terrorism are constantly looking for more efficient and anonymous payment services, to keep ahead of the investigative bodies⁴. As stated on rahanpesu.fi⁴ are virtual currencies, mobile money transferring methods, and alternative payment brokerage services, are examples of the diversification of money transferring. These new methods of transferring money make the tracking of funds generally much more difficult.

There is wide use of legal terms within the thesis, such as policy, legislation, and regulation within this thesis, and thus should these terms be defined and differentiated. When referencing resources, is the term used within the source mostly used within the text. According to Cambridge Dictionary⁵ policy is a plan or a set of ideas to follow in certain situations which have been agreed upon by a group of people, e.g. the government. According to the Parliament of Finland⁶ (Eduskunta) on defining Legislation (Lainsäädäntö), refers legislation to laws in effect, and other regulations. Regulation (Säädös) is further defined as a body of text which contain legal guidance according to the Parliament of Finland⁶. To summarize we can state that regulations can be seen as rules, and directives given, more with a guiding purpose, while legislation is relatable to laws set by countries.

1.4 Demarcation

While this master's thesis aims to research the effectiveness of anti-money laundering legislation there are some important demarcations to be noted and factors to keep in mind when continuing through the text, which will be further presented in this subchapter. It is important to keep in mind how payments and transactions through offshore aren't easy to track, due to these banks lack of reporting account actions and transactions due to characteristics of the offshore centres. Some relevant characteristics mentioned by Koligkionis (2017) is the prohibition of disclosing information on the offshore centers by legislation, the centers reluctance in cooperation, the exchange of information with other countries haven't been arranged, as well as the minimum formalities of creating an international corporation. According to Koligkionis (2017) offshore centres have a key role within the money laundering process due to the anonymity of the accounts. These offshore centres come into importance after the criminal proceeds have been received and placed in the offshore centre, where the banks ensure banking secrecy, by protecting the identity of their customer's through fully anonymous accounts. An important factor of the decision to choose the offshore financial centre to highlight from Koligkionis (2017) research, is

⁵ <https://dictionary.cambridge.org/dictionary/english/policy>

⁶

https://www.eduskunta.fi/FI/naineduskuntatoimii/kirjasto/aineistot/kotimainen_oikeus/kotimaiset-oikeuslahteet/Sivut/Lainsaadanto.aspx

criminals seeking an offshore centre with no obligation imposed to report on suspicious transactions to the national authorities. Koligkionis (2017) continues explaining that increased secrecy relating to the criminal funds is created through several laundering cycles, which could include funds going through many countries, bank accounts, and legitimate businesses.

Even though there is mention of terrorism financing, and the countering of terrorism financing, these numbers won't be used in the data analysis, due to the focus mainly being on money laundering. It should nevertheless be kept in mind that a lot of anti-money laundering legislation goes hand in hand with countering of terrorism financing legislation. The Financial Action Task Force (FATF) work is also focused on anti-money laundering, countering of terrorism financing, and the proliferation of mass destruction weapons, but the focus of this thesis will only be mainly on their anti-money laundering work.

The chosen countries for the focus on in this master's thesis is Finland, Sweden, Norway, and Denmark, due to their close relations and geographic positions as Nordic countries. Also, them being member countries of FATF, as well as Finland, Sweden, and Denmark being in the European Union (EU) and Norway in the European Economic Area (EEA). Within the thesis is the term suspicious reports (SR) used generally, for the purpose of consistency and comparability of the data used within the thesis. When directly referencing sources, is the type of suspicious report used by the source then referenced to in the thesis.

1.5 Thesis structure

This subchapter presents the further structure of the thesis. The second chapter introduces the necessary conceptual and theoretical framework for the thesis, containing the Financial Action Task Force and its different reports, as well as the mutual evaluations of the selected countries. The theoretical framework will then move on to the legislative work on the EU and country level, after which the money laundering and terrorism financing prevention work of the countries selected is presented. Further is the criminal economics in money laundering introduced, after which the cost-benefit analysis (CBA), and finally the legislative impact assessment approach presented. The third chapter goes through relevant literature regarding impact and effectiveness of anti-money laundering regulations, and the cost-benefit analysis in anti-money laundering regulations. In the fourth chapter are the relevant data obtained from the selected countries relating to money laundering and terrorism financing presentation and discussed, which includes the data description, S statistical tests, and the methodology of the thesis. The main results are presented in the fifth chapter regarding the effectiveness of anti-money laundering (AML), and the framework for impact assessments. Lastly in the sixth chapter are the conclusions of the thesis, including some limitations of the thesis, as well as suggestions for further research avenues on the topic discussed.

2 THEORETICAL FRAMEWORK

The main areas of focus of this master's thesis revolve around legislation, the guidelines and directives relating to anti-money laundering and terrorism financing, given by the European Union and Financial Action Task Force (FATF). Furthermore, the thesis includes the topic of cost-effectiveness of anti-money laundering measures. For the analysis, is the legislation, the impact assessment with a cost-benefit analysis to consider, and the topic of criminal economics in money laundering introduced within the theoretical framework. To understand and research the focus areas of this thesis, is it also necessary to provide a comprehensive overview of the legislative work from the EU level to the country level, as well as the preventative work each country.

2.1 FATF

Within this subchapter, the Financial Action Task Force (FATF) is presented, including important reports published by FATF. FATF being a key contributor to the prevention work of money laundering and terrorist financing. Due to this is it important to start by presenting who they are, what they are, and why they do it. FATF (2024a) was established in 1989 and is currently based in Paris. It has currently 40 direct members, in addition to over 200 countries and jurisdictions which have committed to the implementation of FATF Standards. All the four countries focused on in this thesis (Finland, Sweden, Norway, and Denmark) are members of FATF, which unites countries in the fight against money laundering and terrorism financing. FATF is leading this fight globally (FATF, 2024) and research how money laundering and terrorist financing is conducted. FATF furthers the standards used to reduce the risks of money laundering and terrorist financing globally, including country specific assessments on the effectiveness of their actions. Functions of FATF include the monitoring of member countries, to ensure that they have implemented and follow the given FATF standards accordingly. As criminal activities related to money laundering keep evolving to

stay ahead of legislative and investigative bodies, FATF monitors continuously how the criminals and terrorists raise, use, and move their funds. This continuous monitoring by FATF plays an important role in preventing criminals from achieving a strong position in societies. The standards set by FATF (2024) aim to ensure that the actions done globally to prevent organized crime, corruption, and terrorism are coordinated. Continued work on strengthening the global standards is done by FATF, to tackle new risks, such as virtual asset regulation. Collaboration is done with FATFs nine associate member organizations, other global partners, the IMF, and World Bank, to assess the implementation by countries and jurisdictions committed to the FATF Standards. According to FATF (2024) they also hold countries accountable if they fail to comply with the FATF Standards, and repeated failures of implementation can lead to being put under increased monitoring or under a high-risk jurisdiction.

2.1.1 Methodology, Guidance, and Recommendations

The latest FATF Methodology (FATF 2013-2023a), which has been amended over the years, comprises two sections of the technical compliance assessment, and the effectiveness assessment. With both the technical compliance and the effectiveness assessment an analysis of compliance with FATF standards and maintaining of a strong AML/CFT system is presented (FATF 2013-2023a). The FATF Methodology (2013-2023a) supports the assessors to conduct the assessment of compliance with the international AML/CFT standards of a country. The assessment of effectiveness is mainly done through eleven Immediate Outcomes (IO), which represent goals that an effective AML/CFT system should attain according to the FATF Methodology (2013-2023a). To highlight the most relevant IOs for this thesis, is IO4 and IO7 further presented. IO4 measures the way in which financial institutions, designated non-financial businesses or professions, and virtual asset service providers are sufficiently applying preventive measures regarding anti-money laundering and countering the financing of terrorism equivalent to their own risks, and report suspicious transactions (FATF 2013-2023a). IO7 relates to what extent money laundering offences and activities are investigated and prosecuted, including effective and proportionate sanctions (FATF 2013-2023a).

The FATF (2013-2023) recommendations aim to set a framework of measures which are comprehensive and consistent. These FATF (2013-2023) recommendations should be implemented by countries to better combat money laundering and terrorist financing, as well as the financing of proliferation of weapons of mass destruction. It is noted that countries have different and diverse legal and financial systems, administrative and operational frameworks, meaning that all countries are not able to take identical measures for the combating of the earlier mentioned threats (FATF 2013-2023).

The FATF Guidance on National Money Laundering and Terrorist Financing Risk Assessment (FATF 2013) presents key concepts and terms relevant to money laundering and terrorist financing risk assessment, since consistent and unanimous understanding on the topic and important key concepts in relation, are central for a comprehensive understanding of FATFs

guidance. The risk management concepts involve the development of suitable and relevant measures to reduce the level of risk from the assessed level to a lower or adequate level (FATF 2013). The FATF (2013) guidance for assessing money laundering and terrorist financing risk nationally uses key concepts, risk and three factors: threat, vulnerabilities, and consequence of which risk can be seen as a function of. Further FATF (2013) states that identifying and understanding the money laundering and terrorist financing risks, is the first step in addressing them, and the ideal risk assessment should include judgment on threats, vulnerabilities, and consequences. The use of the risk assessment is diverse according to FATF (2013), but particularly for policymakers it provides a framework to formulate the national anti-money laundering and combating financing of terrorism policies. Furthermore, it can help to make reasonable decisions on the allocation of resources, in addition to legal and regulatory frameworks. The allocation of resources to competent authorities is based on number two of FATF (2012-2023) Recommendations. It is stated in FATF (2012-2023) Recommendations that countries should ensure effective mechanisms for cooperation, coordination, and information exchange between policymakers, the Financial Intelligence Unit (FIU), law enforcement authorities, supervisory authorities, as well as other relevant competent authorities domestically. This includes resources for the development and implementation of policies, and activities to combat money laundering, terrorist- and proliferation financing. These cooperation's and coordination's are crucial for the exchange of information domestically as well as internationally, which is crucial for the united fight against money laundering and terrorism financing.

Some of the most relevant and important recommendations of the FATF (2012-2023) to cover in this thesis are described as follows. Recommendation number 1 covers the risk assessment and risk-based approach application, meaning a country should identify, assess, and understand risks relevant for the country relating to money laundering and terrorist financing. Recommendation 3 states that a country should criminalize money laundering and should be applied to all serious offences, including the predicate offences. Recommendation 4 states how policies and operational frameworks in place with a priority on asset recovery on a domestic and international level should be ensured by countries. Recommendation number 20 states that a financial institution should be required by law to report immediately any suspicions, or in case of reasonable grounds of suspicious funds as proceeds of criminal activity to the FIU. Recommendation number 26 discusses how financial institutions should be subject to regulation and supervision as well as ensure that they are implementing the FATF recommendations in an effective manner. According to FATF (2012-2023) recommendations number 29 should a country have an independent and separate entity as a Financial Intelligence Unit which receives and makes analyses on suspicious transaction reports, as well as other information relevant to money laundering and terrorist financing crimes. The FIU should also be responsible for the distribution and publishing of the results of the analyses. Recommendation 30 of responsibilities of law enforcement and investigative authorities states how a designated law enforcement authority, within the national anti-money laundering and countering of terrorist financing

policies framework, is responsible for money laundering and terrorist financing investigations. Recommendation 31 on the powers of law enforcement and investigative authorities continues how they should have the ability to acquire all necessary information and documents for the investigations of money laundering, related predicate offences and terrorist financing. Further does recommendation 33 note how countries should keep statistics related to the effectiveness of the respective country's anti-money laundering and countering of terrorist financing systems. This includes suspicious transaction reports received and the counts of money laundering and terrorist financing investigations, prosecutions and convictions, frozen property, seized property, and confiscated property, as well as mutual legal assistance or international requests for cooperation.

2.1.2 Country mutual evaluations

FATF mutual evaluations are country reports where the implementation and effectiveness of measures to combat money laundering, terrorist and proliferation financing is analysed in depth (FATF 2024b). The reports are then peer reviewed by members from different countries, and the focus of the report is the systems of anti-money laundering and combating of terrorist financing, and a focused recommendation for further strengthening of these systems (FATF 2024b). The total length of the mutual evaluation process takes up to 18 months to complete going through various stages within the process (FATF 2024b). The mutual evaluation process (FATF 2024b) begins with the choice of the assessment team experts, after which the country provides laws and regulations relevant for the technical review. The technical requirements of FATF Standards are analysed, after which a draft report identifying the focus areas for the on-site-visit is made and can be commented on by the country (FATF 2024b). During the next stage of the process (FATF 2024b) are assessors conducting the one-site visit and meeting public and private sectors to see the laws in practice to confirm the effectiveness of them, following a draft of the implemented FATF Standards effectiveness. The mutual evaluation report is then drafted, including the technical compliance and effectiveness, following several rounds of discussion and review by the assessed country and independent reviewers (FATF 2024b). The next stage of the process (FATF 2024b) is when the decision-making body, the FATF Plenary (FATF 2024c) discusses the findings of the report after which the final report is adopted for publication. The final stage of the process (FATF 2024b) is the review for technical quality and consistency by the 198 country members of the FATF Global, following the publication of the final report including an in-depth analysis and recommendations for the country to take for strengthening measures to prevent criminal abuse of the financial system. FATF (2024b) notes that the mutual evaluation report should not be seen as the end of the process, but as the beginning of the country strengthening their measures of anti-money laundering, countering of terrorism financing, and the financing of proliferation.

The rating of effectiveness of a country is the most important part of the evaluation, which is conducted through an on-site visit by a team of experts. The visit scrutinizes evidence that the country being assessed has functioning

measures and that these measures are able to deliver the wanted results (FATF 2024b). Further FATF (2024b) states that the other important component is the assessment of technical compliance, which includes providing the information on the laws, regulations, and other legal instruments of a country for combating money laundering, terrorism- and proliferation financing. The current key documents in the FATF mutual evaluation process, are the FATF Recommendations, Methodology, and Procedures for the FATF Fourth Round of AML/CFT Mutual Evaluations (FATF 2024b).

The latest Anti-money laundering and counter-terrorist financing measures Follow-up Report & Technical Compliance Re-Rating for Finland was published in October of 2023 (FATF 2023). The conclusion states that Finland has made progress regarding most deficiencies of technical compliance. There are only three recommendations which are rated partially compliant, and none have the rating non-compliant. Regarding recommendation 2, the National cooperation and coordination, the rating was largely compliant, and the underlying reason was that the Åland authorities' participation in any of the mechanisms to cooperate and share information for AML/CFT purposes, is non-existent. The rating of recommendation 20 (Reporting of suspicious transactions) was compliant since the recommendation has been fully observed. Recommendation 26 (Regulation and supervision of financial institutions) was rated as largely compliant. Recommendation 29 (Financial intelligence unit) was rated as compliant since the recommendation has been fully observed. The rating of recommendation 33 (Statistics) was largely compliant, and the reason underlying the rating was that there are no comprehensive and reliable sets of statistics available regarding frozen property, seized property, and confiscated property in cases relating to money laundering and terrorist financing. Additional factors were related to missing information on mutual legal assistance (MLA), as well as other international requests on money laundering and terrorist financing cases to or from judicial authorities. Finland's anti-money laundering and countering of terrorist financing measures will again be evaluated in the 5th round of mutual evaluation, meaning that Finland is no longer under enhanced follow-up investigation. Finland received 9 ratings of compliance, 28 ratings of largely complaint, and 3 ratings of partially compliant in their technical compliance. According to the consolidated table of assessment ratings by FATF (2024d), Finland has received 1 rating of high level of effectiveness, 3 ratings of substantial level of effectiveness, 6 ratings of moderate level of effectiveness, and 1 rating of low level of effectiveness.

The latest Anti-money laundering and counter-terrorist financing measures 1st Regular Follow-up Report & Technical Compliance Re-Rating for Sweden was published in September of 2020 (FATF 2020). The conclusion of the report states that Sweden has been able to make progress towards correcting the identified gaps within their technical compliance. Their rating for Recommendation 26 (Regulation and supervision of financial institutions) was upgraded to largely compliant, based on the taken legislative measures, even though minor deficiencies remain. Their rating for Recommendation 15. on new technologies was lowered to largely compliant rating, based on identified deficiencies, and Sweden continues in regular follow up. Sweden received 14

ratings of compliance, 23 ratings of largely complaint, and 3 ratings of partially compliant. According to the consolidated table of assessment ratings by FATF (2024d), Sweden has received 1 rating of high level of effectiveness, 4 ratings of substantial level of effectiveness, and 6 ratings of moderate level of effectiveness.

The latest Anti-money laundering and counter-terrorist financing measures 1st Regular Follow-up Report & Technical Compliance Re-Rating for Norway was published in February of 2023 (FATF 2023a). The conclusion of the report states that Norway has been able to make progress in addressing most deficiencies identified within their technical compliance, only including minor deficiencies. Their rating for Recommendation 15 on new technologies was largely compliant, which was lower than the previous rating. Their rating for Recommendation 26 was upgraded to largely compliant, based on their legislative measures taken, and Norway continues in regular follow up. Changes to Recommendation 15 and 26 were the only once made from the previous follow-up report. Norway received 19 ratings of compliance, 18 ratings of largely complaint, and 3 ratings of partially compliant. According to the consolidated table of assessment ratings by FATF (2024d), Norway has received 5 ratings of substantial level of effectiveness, and 6 ratings of moderate level of effectiveness.

The latest Anti-money laundering and counter-terrorist financing measures 3rd Enhanced Follow-up Report & Technical Compliance Re-Rating for Denmark was published in February 2021 (FATF 2021). The conclusion of the report states that Denmark has been able to make progress in addressing most deficiencies identified within their technical compliance. Their rating for Recommendation 15. on new technologies was lowered to partially compliant rating, based on moderate deficiencies. Denmark continues to stay in enhanced follow up, since improvements on the anti-money laundering and countering financing of terrorism measures still need to be made. Denmark received 6 ratings of compliance, 32 ratings of largely compliant, and 2 ratings of partially compliant. According to the consolidated table of assessment ratings by FATF (2024d), Denmark has received 3 ratings of substantial level of effectiveness, 6 ratings of moderate level of effectiveness, and 2 rating of low level of effectiveness. Found below in Table 1 and Table 2, are the countries technical compliance ratings and effectiveness ratings presented in a consolidated manner.

Table 1 Technical compliance ratings based on FATF (2024d)

Technical compliance: Ratings which reflect the extent to which a country has implemented the technical requirements of the FATF Recommendations				
Jurisdiction	Finland	Sweden	Norway	Denmark
Report Type	MER + FURs	MER + FURs	MER + FURs + FUAR	MER + FURs
Report Date	October 2023	September 2020	February 2023	February 2021
Assessment body/bodies	FATF	FATF	FATF	FATF
R.1	LC	LC	LC	LC
R.2	LC	C	LC	LC
R.3	LC	LC	C	LC
R.4	LC	LC	C	LC
R.13	LC	LC	PC	PC
R.20	C	C	C	C
R.26	LC	LC	C	LC
R.29	C	C	LC	LC
R.30	C	C	C	C
R.31	LC	LC	LC	LC
R.33	LC	LC	PC	LC

C	Compliant
LC	Largely compliant - There are only minor shortcomings
PC	Partially compliant - There are moderate shortcomings

MER	Mutual Evaluation Report
FUR	Follow-Up Report
FUAR	Follow-up assessment report

Table 2 Effectiveness ratings based on FATF (2024d)

Effectiveness: Ratings that reflect the extent to which a country's measures are effective.				
Jurisdiction	Finland	Sweden	Norway	Denmark
Report Type	MER + FURs	MER + FURs	MER + FURs + FUAR	MER + FURs
Report Date	October 2023	September 2020	February 2023	February 2021
Assessment body/bodies	FATF	FATF	FATF	FATF
IO1	SE	ME	SE	ME
IO2	HE	HE	SE	SE
IO3	LE	ME	ME	LE
IO4	ME	ME	ME	LE
IO5	ME	ME	ME	ME
IO6	SE	ME	SE	ME
IO7	SE	SE	ME	ME
IO8	ME	SE	ME	ME
IO9	ME	SE	SE	SE
IO10	ME	ME	ME	ME
IO11	ME	SE	SE	SE

HE	High level of effectiveness
SE	Substantial level of effectiveness
ME	Moderate level of effectiveness
LE	Low level of effectiveness

MER	Mutual Evaluation Report
FUR	Follow-Up Report
FUAR	Follow-up assessment report

2.2 Legislation

This subchapter introduces legislation relating to anti-money laundering and combatting terrorist financing on the EU level as well as the countries chosen for the focus of this thesis. Anti-money laundering and terrorism financing legislations and regulations in Finland are based on EU directives and guidelines, as well as FATF recommendations. The three other countries, Sweden, Norway, and Denmark, that are included in this thesis are also members of FATF and

similarly follow their recommendations. EU directives and guidelines are followed by the member countries Finland, Sweden, and Denmark. Whereas Norway is governed by the same basic rules as other EU member states, and some of the rules and directives set by EU, since it is a part of the European Economic Area (EEA). As an example, these include the EU's anti-money laundering directives (Norway and the EU, 2022). Motivation for using the selected countries in comparison to each other and examining them together, can also be found in the similarity of their AML regulations.

The most important document from the European Commission relating to anti-money laundering and impact assessment, is the working document on impact assessment accompanying the anti-money laundering package from 2021, and the methodology for assessing technical compliance with the FATF recommendations and the effectiveness of AML/CFT systems from FATF. The European Commission has the responsibility for producing the risk assessments of risks affecting the internal market of the EU (supranational risk-assessment, SNRA), and the European Union endorses anti-money laundering and combating terrorism financing legislation with strong objectives for the international contributions outright. The EU directives, DIRECTIVE (EU) 2015/849 on preventing the use of the financial systems for money laundering or terrorist financing, and the REGULATION (EU) 2015/847 on information on the payer accompanying transfers of funds, take into consideration the FATF recommendations of 2012, and were modernized in 2015. In addition, are these above-mentioned directives further strengthening some aspects for strong and high quality in the combatting of money laundering and terrorism financing. The 5th anti-money laundering Directive was published in 2018, but already in 2021, presented the European Commission a new package of legislative proposals for further strengthening the EU's anti-money laundering and countering terrorist financing rules. The Anti-money laundering and countering the financing of terrorism legislative package contains four legislative proposals: the regulation on establishing of a new EU anti-money laundering and countering financing of terrorism authority, regulation on anti-money laundering and countering financing of terrorism including rules for the beneficial ownerships and customer due diligence, a 6th anti-money laundering Directive, and the 2015 regulation on transfers of funds a revision with the objective of tracing crypto-asset transfers. The final elements of the legislative package have been approved in 2024 by the co-legislators and are expected to come into force in July 2024. The new rules will mostly apply from 2027⁷.

The Ministry of Finance and the Ministry of the Interior are responsible for the prevention of money laundering and terrorist financing in Finland. Additional Ministries associated with the preventative work are the Ministry of Justice, the Ministry for Foreign Affairs, the Ministry of Economic Affairs and Employment, and the Ministry of Social Affairs and Health⁸. The Ministry of Finance⁸ oversees regulations issued relating to money laundering, and the risk

⁷ Retrieved May 5, 2024, from Latest update on Anti-money laundering and countering the financing of terrorism legislative package - European Commission (europa.eu)

⁸ Valtiovarainministeriö. Rahanpesun ja terrorismin rahoittamisen estäminen. Retrieved October 25, 2023, from <https://vm.fi/rahanpesu>

assessment of money laundering and terrorism financing and is also responsible for the Anti-money Laundering Act.

Current Finnish national laws relating to money laundering and terrorism financing, are listed as follows: The Anti-Money Laundering Act (Act on Detecting and Preventing Money Laundering and Terrorist Financing), Act on Virtual Currency Providers, Government Decree on Customer Due Diligence Procedures and Risk Factors in Preventing Money Laundering and Terrorist Financing, Government Decree on Politically Exposed Persons, Act on the Bank and Payment Accounts Control System, Act on the Financial Intelligence Unit, The Criminal Code of Finland, Administrative freezing of terrorist funds, Trade Register Act, Associations Act, Freedom of Religion Act, Foundations Act, Business Information Act, International Financial sanctions⁹.

According to the Swedish Police (Polisen 2023a) there are three main laws on the fight against money laundering and terrorism financing. These are listed as follows: The Act on Measures Against Money Laundering and Financing of Terrorism (Money Laundering Act) law (2017:630), The Act on Punishment for Money Laundering Crimes, law (2014:307), and the Terrorist Crimes Act, law (2022:666). In addition to these, there are the ordinance (2009:92) on measures against money laundering and the financing of terrorism, Act (2017:631), on registration of beneficial owners, and the law (2022:666), the Terrorist Crimes Act. According to the financial supervisory authority of Norway (Finanstilsynet 2023a), is the current main law on the fight against money laundering and terrorism financing the Act relating to Measures to Combat Money Laundering and Terrorist Financing (the Anti-Money Laundering Act). According to the financial supervisory authority of Denmark (Finanstilsynet 2023), is the current main law on the fight against money laundering and terrorism financing the Act on Measures to Prevent Money Laundering and Terrorism Financing (the Anti-Money Laundering Act).

2.3 Prevention of money laundering and terrorism financing

This subchapter shortly presents the prevention work of money laundering and terrorism financing in Finland, Sweden, Norway, and Denmark. The Financial Intelligence Unit of the National Bureau of Investigations in Finland is in charge of preventing, detecting, and commencing the investigation into money laundering and terrorism financing, as well as exposing such activities (Poliisi 2023a). As mentioned earlier in the FATF section, the FIU itself does not investigate any crimes and is an independent and nonpartisan unit. The main preventive actions are required to be done by merchants and financial operators encountering signs of money laundering in their business operations, and when such signs are encountered, are they obliged to file a report of it to the Financial Intelligence Unit Poliisi 2023a). The prevention of terrorism financing is mainly

⁹ Rahanpesu.fi. Legislation - Prevention of money laundering and terrorist financing. Retrieved October 11, 2023, from <https://rahanpesu.fi/en/legislation>

done by freezing assets which are suspected to be used for the purpose of terrorist financing (Poliisi 2023a). In addition to handling reports of suspicious activity, the Financial Intelligence Unit does handle, analyse, and provide relevant information to other authorities in Finland and works closely internationally with other authorities (Poliisi 2023a) The prevention of money laundering and terrorism financing is a collaborative effort, where obliged entities follow obligations set in the Anti-Money Laundering Act, in addition to the supervisory authorities which the obliged entity also might have to register to¹⁰. Obligated entities should prepare a money laundering risk assessment relating to their business activities, know their customers and track their activities, as well as ensure enough knowledge and training for the staff to be able to observe obligations under the Anti-Money Laundering Act¹⁰. The Swedish police (Polisen 2023b) is in charge of the preventative work of money laundering and terrorism financing, in collaboration with 16 other authorities and organizations. This coordinated function is among other things in charge of producing the yearly national risk assessment of money laundering and terrorism financing according to Finansinspektionen (2023). According to the Norwegian National Bureau of Investigation's Financial Intelligence Unit¹¹ are preventative measures against economic crime taken before, during, and after the offenses. Crime prevention includes a difference between social prevention, which relates to influencing people's behaviour, and situational prevention, which relates to the physical environmental changes, making the carrying out the offenses more difficult¹¹. Økokrim¹¹ continues, how the preventative measures can be split into vulnerability reduction measures and threat reduction measures, and based on protecting victims, and preventing the actualization of current threats are the measures then categorised. The emphasis on different factors when assessing relevant preventive measures within the individual threat can be e.g. reduction in recruitment to crime, deterrence, protecting current vulnerable targets, disabling through sanctions, and damage reduction, in addition to close collaboration with other public actors, the private sector, and voluntary organizations in their preventive actions¹¹. Hvidvasksekretariatet¹², the Danish Financial Intelligence Unit receives, analyses, and passes on information in relation to possible money laundering or terrorism financing. The Danish FIU¹² operates independently with its competence and capacity to carry out tasks and make decisions on analysing, requesting, and distributing information. Despite operating independently does Hvidvasksekretariatet¹² collaborate both nationally and internationally in the effort to fight money laundering and terrorism financing.

¹⁰ Rahanpesu.fi. Obligated entities. Retrieved November 2, 2023, from <https://rahanpesu.fi/en/obliged-entities>

¹¹ Økokrim. Forebygging av økonomisk- og miljøkriminalitet. Retrieved April 17, 2024, from <https://www.okokrim.no/forebygging.563199.no.html>

¹² Hvidvasksekretariatet. Om Hvidvasksekretariatet. Retrieved April 17, 2024, from <https://hvidvask.dk/om-hvidvasksekretariatet>

2.4 Criminal economics in money laundering

This subchapter discusses the criminal economics in money laundering, regarding the model (models) being used in the thesis. A theoretical model related to economics of crime in money laundering has been derived by Masciandaro (1999, 2007). This model was also used in Ferwerda (2009) to consider if anti-money laundering regulation is actually able to reduce such criminal activity. The process of money laundering operation according to the economic model of Masciandaro (1999) is described in Figure 1. The model describes the sector of criminal actors as rational agents whose actions (optimal decisions) can be deduced from a set of assumptions that concern the cost of money laundering, the risk of being caught and the severity of penalties that apply. Figure 2 describes the set of actions the criminal actor can take, and the expected utilities associated with these actions. As further shown by Masciandaro (2007), the optimal decision regarding the level of liquidity to launder Y^* equals under the model and the given constraints:

$$Y^* = [(1+r)(1-p)-c]/2pt$$

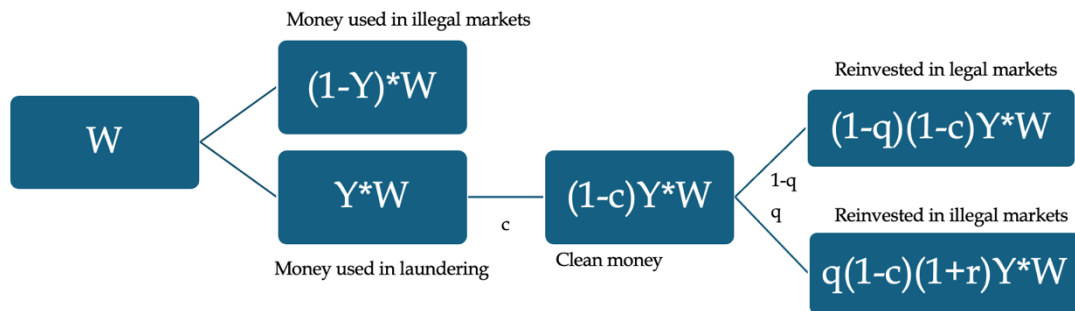


Figure 1 The money laundering process based on Masciandaro (1999)

Variables in Figure 1 are defined as follows. W = amount of liquidity initially available from criminal activity, $Y(0 < y < 1)$ = fraction of money laundered, $c(0 < c < 1)$ = cost of laundering operation as a fraction of liquidity to be laundered, q = fraction laundered liquidity to be reinvested in illegal markets, $r(r > 0)$ = a fraction of the differential in expected real returns between illegal and legal investments.

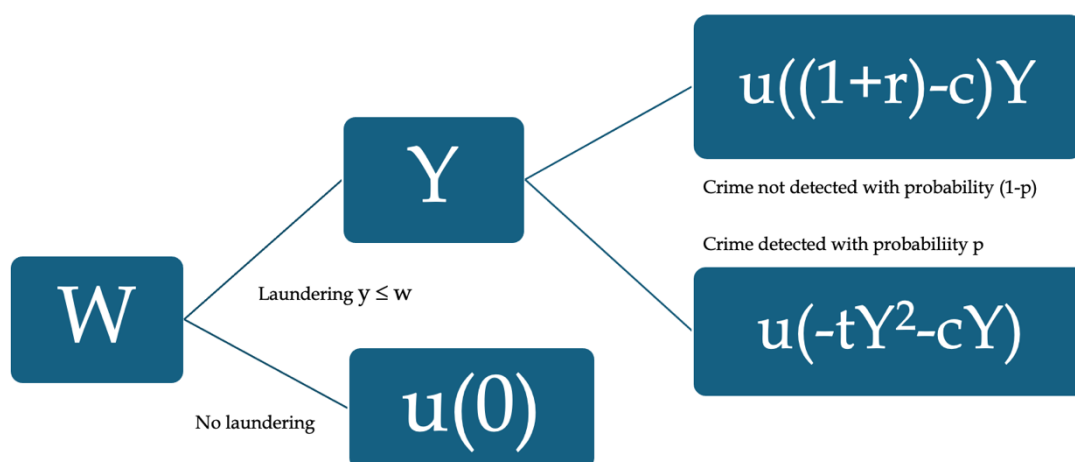


Figure 2 Possible decisions and utilities of the resulting outcomes based on Masciandaro (2007)

The possible decisions and utilities of the resulting outcomes based on the microeconomic model by Masciandaro (2007). The above is a modified version of Figure 1. The alternatives for the criminal organization in Masciandaro (2007) to match the notation with Figure 1 of the thesis. The Variables in Figure 2 are defined as follows. W = amount of liquidity initially available from criminal activity, $Y(y \leq w)$ = the amount of liquidity laundered, $r(r > 0)$ = rate of return expected from reinvestment of laundered liquidity, $c(0 < c < 1)$ = cost of the money laundering operation as a fraction of laundering liquidity, p = probability of laundering attempt to be detected by the investigative bodies, $t(t > 0)$ = severity of penalty from detected money laundering attempt (in financial units). Note that the total sanction is assumed to be a multiple of the Y^2 .

Where the quantities are defined as in Figure 1 and Figure 2. The laundering decision is thus influenced by: the level of expected return from invested laundered money r , the probability of a laundering attempt being detected (p), the cost of laundering (c) and the severity of the penalty from the detected laundering attempt (t) defined in economic terms.

Despite being based on a number of assumptions which can be questioned, the above theoretical framework is still useful as it allows the legislative bodies to consider how their work combined with the work of investigative bodies affects the economics of crime, that is the money laundering as an economic activity in this case. Legislation can influence the probability of detection and the severity of the penalty to deter criminal actors from money laundering. If the severity is high enough, the expected utility can be even negative and money laundering would then not be profitable. However, legislative bodies in democratic countries tend to in general follow the principle which states that the severity of a penalty should be proportional to the severity of the crime, such that penalties should not be arbitrarily harsh. This poses limits to how much legislation can deter money laundering through t . Legislation can influence the probability of detection p in various ways, for example by imposing rules on reporting to actors in the financial markets and sanctions on the actors if they do

not comply with the rules. As all reporting comes with a cost, it is not simple to define the rules such that they are effective. Also, legislation must provide sufficient resources to the investigative bodies such that reports of potential money laundering are investigated, otherwise legislation cannot achieve high p . In the empirical part of the thesis, we will illustrate this problem by a comparative analysis of the Nordic countries using the method from Harvey (2008).

In addition to deriving the economic models of money laundering, Masciandaro (1999, 2007) notes that the societal cost of money laundering legislation can be substantial if the legislation is too stringent, such that it makes the financial system too rigid and inefficient, and at the same time it implies high operational costs for the investigative bodies.

2.5 Cost-Benefit Analysis

This subchapter presents several different approaches to a cost-benefit analysis, for the purpose of creating a framework for legislative AML impact assessments. A cost-benefit analysis should be included as a standard practice in the assessment of both domestic and international effects of regulatory actions Shiman (2021). Ideally, a cost-benefit analysis is able to show in a clear manner the costs and benefits of any legislation. In the case of money laundering and terrorism financing legislations, one further role is also to create a framework for future reference (Shiman 2021). The strict anti-money laundering and countering of terrorism financing regulation by the U.S. government has probably increased more costs for innocent parties than the criminals, and that the costs of compliance with these regulations have increased rapidly across years according to Shiman (2021). Shiman (2021) continues on how domestic and international actions costs should be weighted, and not only the benefits, which would thus justify the effects and the determination of most and least cost-effective elements. Thus, would the unintended side effects be reduced, costly elements levelled out more proportionally, and regulations with the least harm strengthened according to Shiman (2021).

Based on the Better Regulation Guidelines (2017) of the European Commission, it is apparent that legislative bodies need to include an impact assessment in their legislative preparations, which should contain the costs and benefits in addition to the impacts across different societal aspects. According to the Finnish prime minister's office (Prime minister's office 2016), the cost-benefit analysis approach should be more widely used in the assessment of successes of legislative projects, translating to the regulatory impact assessments. However, defining costs and benefits of current anti-money laundering and terrorism financing preventative legislation is considerably more difficult than for most other cases of legislation, since the amount of laundered money or terrorist financing funds are subject to considerable uncertainty due to these actors trying to hide all such transactions from the authorities.

For this particular reason, as an example, Geiger and Wuensch (2007) limit their research into the topic to a qualitative approach with a stylization of the

outcomes due to costs and benefits of anti-money laundering measures being so difficult to quantify. Yeandle, Mainelli, Berendt, and Healy (2005) state how it is impossible to find reliable information relating to AML regulation implementation costs and benefits, and that the lack of quantitative information makes it hard to make an estimation on the current and future legislative impact. In their research Yeandle et al. (2005) divides costs into three groups within an economy, costs that affect the government, costs that affect the financial service industry and other included in the AML regulation, and the costs that affect the general public. It is further noted how costs can also be divided into setup costs and ongoing or continuing costs, and Yeandle et al. (2005) also state how benefits tend to be on a country level.

Unger, Walker, Ferwerda, Van den Broek, and Delean (2013) has in their report on economic and legal effectiveness of anti-money laundering (AML) and combating terrorist financing (CFT) policy created components for a cost-benefit analysis on anti-money laundering and countering of terrorism financing regulations. Unger et al. (2013) tried to do a cost-benefit analysis for the countries in the EU-27 for their anti-money laundering and countering of terrorism financing policies, based on gathered statistics. Due to Unger et al. (2013) not being able to gather enough statistics to make reasonable enough estimates from them, they decided to make a cost-benefit analysis for a hypothetical country though combining information they were able to gather from the countries. It is stated that the historical approach is when the costs of setting up anti-money laundering and countering of terrorism financing policy is calculated, to then be compared to the received benefits from the policy. The historical approach would be able to tell if starting anti-money laundering and countering of terrorism financing policy have been effective. Further, Unger et al. (2013) state how the current approach is when the costs saved from stopping the current anti-money laundering and countering of terrorism financing policy is assessed, and the consequential benefits lost, thus showing whether the current efforts should be continued. The authors also state that concentrating on the current approach seems most beneficial due to it being more policy relevant. Unger et al. (2013) thus demarcate how some parts of their cost benefit analysis is difficult to assess and calculate due to the limited and diverse information available for a cost-benefit analysis.

Unger et al. (2013) defines the most important components on a country level for a cost-benefit analysis for anti-money laundering. The costs which could be included in the analysis are as follows: ongoing policy making costs, sanction costs (repressive i.e. against money launderers), costs of FIU, costs of supervision, costs for law enforcement agencies and judiciary, duties of the private sector, reduction in privacy, and efficiency costs for society and the financial system. Further Unger et al. (2013) defines the benefits which could be included in the analysis as follows: fines (preventive and repressive), confiscated proceeds, reduction in the amount of money laundering such as fewer predicate crimes, reduced damage effect on real economy, and less risk for the financial sector. Based on Unger et al. (2013) research methods into the costs and benefits, Table 3 and Table 4 below are created for a clearer picture into how the different sections have been estimated.

Table 3 Costs of AML/CFT policy based on Unger et al. (2013)

Cost sections	Cost estimation method
On-going policy making	The overall budget for the ministry responsible for AML/CFT policy / number of full-time staff dedicated to AML/CFT tasks
FIU	Budget of FIU / number of FIU staff
Supervision	The budget of supervisor, staff of supervisor, number of supervisors
Law enforcement and judiciary	Budget of law enforcement authority (LEA), AML/CFT budget of LEA, number of LEA staff, budget of judiciary, AML/CFT budget of judiciary, number of staff in judiciary
Sanction costs (repressive)	Durations of suspended imprisonment i.e. probation ML, unsuspended imprisonment ML, suspended imprisonment TF, unsuspended imprisonment TF
Duties of the private sector	Costs for filing a report to the FIU for the obliged entity, training costs for the obliged entity
Reduction in privacy	(Moral cost)
Efficiency costs for society and the financial system	N/A

Table 4 Benefits of AML/CFT policy based on Unger et al. (2013)

Benefit sections	Benefit estimation method
Fines (repressive)	Average number of criminal fines imposed per year, average of criminal fines, min/max criminal fines for corporate criminal liability, administrative law sanctions
Confiscated proceeds	Average of confiscation ML, average confiscation TF
Reduction in the amount of money laundering and terrorism	N/A
Effects of money laundering: reduction in predicate crimes, reduction in damage effect on real economy, and less risk for the financial sector	N/A

In 2022 New Zealand's Ministry of Justice published a report on the review of the anti-money laundering and countering financing of terrorism act 2009. In the review they analyse how the AML/CFT regime has operated, considering costs and benefits of it. Through a survey, estimating the reporting entities costs for the financial year, the estimated per-business cost and the total private sector costs were derived regarding the regime. The actual costs from the public sector were then added, giving the total cost of the regime per annum. The AML/CFT regime's regulatory performance was also measured through a survey to the governmental employees working on the regime. The report by the Ministry of Justice (2022) also estimated significant benefits of the regime, both monetary and non-monetary. The benefit of the monetary value of disruption of illegal drugs and fraud was estimated. The report also considers a non-existent or weaker regime, which would result in FATF identifying the country as a high-risk jurisdiction, thus damaging their international reputation. The report (Ministry of Justice 2022) estimates this to reduce capital inflows between 4,6 % and 10,5 % of their GDP, which they calculate as 58 to 134 times their estimated costs of the AML/CFT regime.

The conducted survey (Ministry of Justice 2022) collected data on the costs of the private sector's compliance with the AML/CFT act reviewed. To achieve an accurate estimation, the information collected included: who the business' supervisor is, the business type, when they became a reporting entity, business size, and total revenue for the financial year. Compliance information was asked through if they are a member of a designated business group, if obligations are outsourced, and if Ministerial exemptions are relied upon. The questions regarding cost estimations of financial crime obligations were, number of employees undertaking financial crime compliance work and the employees' annual costs, as well as the employees proportion of time spent on AML/CFT. Further costs, on total financial crime licensing costs, total vendor, service provider, and contracts costs were asked, and costs passed onto any customers. The considered accuracy of the surveyed estimations, and the three most expensive and least expensive obligations were asked in the survey (Ministry of Justice 2022). The total private sector AML/CFT costs included the trimmed average value of total labour costs, software costs, and vendor, service provider and contractor costs, all with relation to AML/CFT. The total costs per annum of the AML/CFT regime were estimated through adding the total private sector AML/CFT costs, to the public sector costs relating to AML/CFT. The report (Ministry of Justice 2022) states how for a legislative reform package a cost-benefit analysis is conducted to review the costs of the policy changes for the government as well as for the private sector. In this case a business compliance cost study by Deloitte (2016) was contracted by the Ministry of Justice. Deloitte (2016) developed two costing models to be able to maximize the use of the limited data derived through surveys and interviews. It was though concluded by Deloitte (2016) that the bottom-up approach gave a more complete account of all internal and external costs, which adds transparency and data quality. The bottom-up approach based on Deloitte (2016), is detailed and includes the absorbed internal costs. This approach provides data points from the online survey, whereas the majority was received from the industry bodies and reputable sources, where the outputs have been used as

the high-end estimates according to Deloitte (2016). The establishment and ongoing costs were presented by Deloitte (2016) through which Table 5 was derived, and the more significant costs related to compliance requirements were presented by Deloitte (2016) through which the Table 6 was derived:

Table 5 Establishment and ongoing costs survey entities based on Deloitte (2016)

	Establishment cost (Year 1)		Ongoing costs (per annum)		Average cost per client or transaction (based on high end cost)	Estimated number of businesses within the sector	Estimated number of reporting entities
	Value (low)	Value (high)	Value (low)	Value (high)			
Sector					value per client or per transaction		
Total costs							

Table 6 Costs of compliance requirements categorization based on Deloitte (2016)

Compliance requirement	Establishment cost			Ongoing costs		
	Internal	External	Total	Internal	External	Total
Customer due diligence						
Account and transaction monitoring						
Record keeping						
AML risk & compliance programme						
Suspicious transaction reporting						
Total costs						

The report (Ministry of Justice 2022) also estimates the actual AML/CFT costs for the private sector, presented by supervisor authority and by type of entity, and the public sector costs of the agencies responsible for AML/CFT functions. The benefits on a sectoral and entity level were surveyed by Deloitte (2016), though only compiling the top 3 benefit statements of each category. Through the results of Deloitte on the benefits (2016) is following Table 7 compiled for an overview of the important categories and questions for a view on the benefits.

Table 7 AML/CFT Benefits based on Deloitte (2016)

Benefit category	Questions
Financial and legal risks reduce	Risk of breaching legal requirements will decrease / Risk of financial and reputational losses related to internal and external fraudulent activities decrease
Improvement in business efficiency	Improved systems, processes and reporting help achieve better business decisions / Quality customers are attracted and potentially harmful customers are deterred
Improvement in governance and assurance processes	Better information flow about business activities to senior management / Risk management and compliance abilities improve
Improvement in employee awareness and training	Employee engagement improved though being a respected and ethical business / Customer relationship and risk management skills of employees improve
Protected and/or enhanced brand reputation	Reputation of a safe and ethical business is enhanced or maintained / Businesses benefit from the country's reputation of being a safe and ethical place to conduct business in

As presented by the Ministry of Justice (2017) is their cost benefit analysis broken up in modelled benefits, and modelled costs, which is made up of business compliance costs and direct departmental costs. The Ministry of Justice (2017) also present strategic benefits, which includes deterrence value, decreases in social harm, and improved international reputation. The Ministry of Justice (2017) AML cost-benefit analysis impact analysis presents impacts of the proposal with monetary value, which are presented in Table 8 below.

Table 8 AML/CFT CBA based on Ministry of Justice (2017)

	Costs	Benefits
Benefit cost ratio (BCR)	Governmental expenses of the initiative	Seizure and forfeiture revenues to the Government
	Compliance costs for businesses and consumers	Crime reduction through the restraint and confiscation of money laundering funds

Strategic and societal	Benefit	Resulting from/in
	Deterrence of money laundering	Increased monitoring, consequent benefits from reduction in precedent crime
	Decrease in social harm	Decrease in crime
	Improved international reputation	Better trade terms, perception of a safe country to do business with

The impact analysis by the Ministry of Justice (2017) includes a summary table, shown in Table 9 to provide an overview of the important sections, which could be generally considered in a cost-benefit analysis of an impact assessment in AML regulations.

Table 9 AML/CFT impact summary based on Ministry of Justice (2017)

Identified and listed impacts			Certainty
Decreased money laundering resulting in decrease in predicate crime			
		Benefits model	High/Medium/Low
Cost of the initiative			
Fiscal operating and capital costs of the initiative		Based on historical data by supervisors and the regulated sectors scale	High/Medium/Low
Government Benefits/(Costs)			
Forfeiture of revenue			High/Medium/Low
Total quantified government impact			High/Medium/Low
Wider societal benefits/(Costs)			
Sector compliance costs		Startup and ongoing compliance costs	High/Medium/Low
Upper bound to crime deterred		Not included in totals	High/Medium/Low
Drug harm prevented		Not included in totals	High/Medium/Low
International Reputation/Trading risk		Ease of Shell company establishing? Anti-corruption rating and ranking?	High/Medium/Low
Net present value of total quantified societal impacts		Excludes fiscal cost of initiative	High/Medium/Low

Sproat (2007) research does a preliminary cost-benefit analysis of the UK's anti-money laundering and asset recovery regime. This financial cost-benefit analysis calculates the financial costs and the financial benefits, where the

financial costs include private costs, and the public costs. Table 10 summarizes the main results of Sproat (2007).

Table 10 CBA based on Sproat (2007)

Financial costs		Financial benefits	
Private costs: Jurisdiction	Public costs: public bodies	Recovered assets	
Banking sector	Primary AML/CFT legislator and ministry	Restrained assets, removed from the reach of criminals which aren't able to be re-invested at that point in time	
Other financial service institutions	Prosecution office for money laundering offences		
Accountants and lawyers	Judicial system processing the accused, and court services		
Estate agents, casinos and other	Staff costs regarding asset recovery and AML tasks		
	Financial intelligence unit		
	Agency costs in confiscation and asset recovery		

Further investigating the preliminary cost benefit study by Harvey (2004) the consensus is that the costs and benefits of compliance with money laundering regulation can be divided into the private costs and benefits and the public societal costs and benefits. Harvey (2004) states how the integrity of the banking and financial industry and therefor the financial markets effective functioning is relying on its reputation. The optimal level between the costs on the society through money laundering regulation, and the benefits achieved for the society through the reduction in money laundering needs to be established according to Harvey (2004). It is further stated in Harvey (2004) research, how the inefficiencies imposed on society and the impact on all companies and individuals administering financial transactions weight against the social benefits of the reduction

in money laundering activity. Harvey (2004) states that the issue on quantifying the benefits throughout research on the costs and benefits of money laundering regulations remain. Harvey (2004) highlights the UK's Financial Services Authority (FSA) comment on how the overall benefit is highly dependent on the practical contribution of suspicious transaction reports (STRs). According to Harvey (2004) there is a lack of prosecutions stemming from STRs. Thus, can it be justified to question the benefits in relation to the compliance cost burden. The turnover rate of prosecutions from STRs should thus be assessed, due to the burdensome compliance costs the industry faces, to further justify the relationship between the costs and benefits of AML and CFT regulations. Table 11 presents the findings of the preliminary cost benefits study by Harvey (2004).

Table 11 CBA based on Harvey (2004)

Costs	Benefits	
Private costs	Private benefits	
Tangible operational costs	Costs avoided	
Physical and human capital used to comply with AMLR	Intangible benefits	Tangible benefits
	Overall reputation, affecting the relationship with customers, competitors, and the outside world	Avoidance of penalties from non-compliance
	Reduction in vulnerability	
Societal costs	Societal benefits	
Inefficiencies imposed on society	Governmental reputation regarding compliance with international requirements	
	Integrity of the financial system	

A review will further be done on the impact assessment conducted by the HM Treasury (2022) on the amendment on the UK's Money Laundering and Terrorist Financing regulation, to receive further knowledge on how costs and benefits of an anti-money laundering regulation has been analysed in practice. The full economic assessment (HM Treasury 2022) presents the costs categorised into total transition, average annual, and total cost, with low, high, and best estimates. The full economic assessment (HM Treasury 2022) then further introduces the key monetised costs by main affected groups are presented as direct and indirect costs and then the non-monetised costs are presented as direct and indirect costs. Equivalently are the benefits in the full economic assessment (HM Treasury 2022)

presented. The direct costs and benefits as well as the indirect costs and benefits on business is analysed in a corresponding manner. Further reviewing the UK's Financial Conduct Authority (FCA) (2024) way of analysing the costs and benefits of their policies provides structured evaluation stages and elements to consider in estimating costs and benefits of policies. Some important steps taken and costs and benefits to be highlighted from the analysis (Financial Conduct Authority 2024) are presented in Table 12 below.

Table 12 CBA based on Financial Conduct Authority (2024)

Benefit estimation stages: Identifying the benefits, quantifying those affected by harm, quantifying those from whom harm is reduced, monetising benefits	Compliance cost estimation steps: Identifying functions of firms affected, estimating the increase in the activities of those functions, one-off costs and ongoing costs of regulatory changes, monetising
Benefits to consumers: Monetary and psychological benefits	Costs to consumers: Cost pass-through
Benefits to firms: Increased efficiency, trust and reputation, competition, risk reduction, market integrity, liquidity benefits	Costs to firms: Staff time, capital invested in systems for compliance, fees to help with compliance activities

LexisNexis (2017) survey report on the true cost of anti-money laundering compliance in Europe with a focus on the EU's Fourth AML Directive. LexisNexis (2017) states how the most notable costs are relating to labour resources. Indirect costs can be among others, stated by LexisNexis (2017) lost productivity, customer on-boarding delays. Elements estimated by LexisNexis (2017) as AML compliance costs, were labour and resource costs, costs for systems, and governance costs which include such as transaction monitoring, sanctions screening, investigations, reporting, and risk assessments. The LexisNexis (2017) report states how AML compliance also brings benefits, some of which are presented as improvements in data management of customers and financial risks, an increased understanding of customers and their risk tolerance.

The current method for cost-benefit analysis can be used in impact assessment to show the current efforts effectiveness and if they should be continued to further show the value of the impact of the legislation. This could also show the effectiveness of the current situation, after which an analysis of the costs and benefit the current drafted legislation could provide.

2.6 Legislative impact assessment

This subchapter presents a review of a Finnish and Swedish impact assessment, the Finnish guidelines of impact assessments in law drafting, the legislation

evaluation council's review in 2021, and the Swedish review on a better impact assessment. This helps us to investigate the current situation of anti-money laundering impact assessments in law drafting and what guidelines Finland already have, which can be mirrored to the Swedish better impact assessment review suggestions.

To start off, we will look at the impact assessment guidelines for law drafting (Valtioneuvosto 2022), and then a review of an impact assessment in a government proposal relating to anti-money laundering and countering of terrorism financing. The chosen governmental proposal for the example is chosen based on the governmental proposals which the legislation council gave a statement on (Valtioneuvoston kanslia 2021) to then be able to link their improvements to the governmental proposal itself. The governmental proposal (Hallituksen esitys HE 236/2021) to the parliament on amending sections 3 and 20b of the Act on the Prevention of Money Laundering and the Financing of Terrorism and the Act on Financial Supervision into laws.

According to the Finnish Government's (Valtioneuvosto 2022) law drafting impact assessment guidelines should the effects be primarily evaluated both quantitatively and qualitatively, since the methods of assessment are able to complement each other. Methods used for the quantitative assessment are statistical or mathematical calculations, which can relate to estimations of the magnitude of the effects in euros or to the size of a target group for example. The guidelines (Valtioneuvosto 2022) further states examples of methods which can be used in the impact assessment such as statistical explanatory analyses, statistical or mathematical modelling, the cost-benefit analysis, cost-effectiveness analysis, and the standard cost model. To highlight the importance of the quantitative analysis, it is also stated in the guidelines (Valtioneuvosto 2022), how efforts towards a quantitative assessment of the economic effects must be made.

The impact assessment section of the drafted governmental proposal (Hallituksen esitys HE 236/2021) is broken down into subchapters under the section main effects. These subchapters are as follows: economic effects, effects on households, effects on companies, effects on the public finances, the national economic effects and overall assessment of economic effects, effects on the activities of the authorities, effects on audit supervision, effects in the financial supervisory authority and the regional state administrative agency for southern Finland, effects on all supervisory authorities, effects on the financial intelligence unit, effects on the prison and probation service of Finland, other authority effects, and lastly other social effects, under which effects on the status of citizens and the functioning of civil society is presented. The Finnish council of regulatory impact analysis statement on the drafted governmental proposal (Hallituksen esitys HE 236/2021) conveys how the drafted governmental proposal partially complies with the law drafting impact assessment guidelines. They further comment on how the qualitative analysis on the effects has been mostly done accurately and with care, providing a fairly good idea of the qualitative effects.

In 2021 the legislation evaluation council (Valtioneuvoston kanslia 2021) gave a statement on the governmental proposal draft on the legislation on prevention of money laundering and financing of terrorism and the legislation on financial supervision by the Ministry of Finance. The council (Valtioneuvoston

kanslia 2021) states how the proposal is lacking in examples of the application of the law as well as its impact. They further state how the broadness of the actions generate to the obliged entities and the supervisory authorities should be able to be deduced from the proposal. The council (Valtioneuvooston kanslia 2021) also comments how the proposal should weigh the administrative burden it would cause, against the benefits of crime prevention, and a more specific assessment of the effects of money laundering and terrorism financing should be conducted. Further mentioning how the proposals should also specify the effects it would have on tens of thousands of obliged entities. The current money laundering and terrorism financing situation should be presented within the proposal, since based on the draft it isn't possible to get a sufficient understanding of the current scale of money laundering and terrorism financing.

The Swedish governmental proposal, Cooperation against money laundering and financing of terrorism (Regeringens proposition 2021/22:251), is chosen to be reviewed in this case to receive a wider knowledge on the content of an impact assessment on legislation of prevention money laundering and terrorism financing. The government assessed that the proposal (Regeringens proposition 2021/22:251) would add to the increase in efficiency of the authorities' and credit institutions' contribution to anti-money laundering and countering of terrorism financing work, with positive social-economic effects. It is further stated that the participating credit institutions may initially expect somewhat higher costs in e.g. the training of personnel but is outweighed by the advantages the governmental proposal would bring to these institutions. The governmental proposal assessment (Regeringens proposition 2021/22:251) states that there wouldn't be any costs for the authorities participating but would increase efficiency in its information exchange. On the other hand, would some costs increase for the companies concerned, the country administrative board, and the Swedish companies' registration office. The assessment of the proposal (Regeringens proposition 2021/22:251) states the any additional costs for the authorities must be managed within existing frameworks as well as through fee collections. The investigation's assessment mostly agrees with the government's assessment of the governmental proposals (Regeringens proposition 2021/22:251) impact assessment, and most of the entities giving a statement confirm or have no objection to the assessment. The entities giving a statement on the governmental proposal regarding the impact of it, are as follows: the Swedish estate agents inspectorate, the trade union for employees in the financial sector (Finansförbundet), the association of Swedish Finance houses, the Swedish bankers' association, the administrative court in Stockholm, the Swedish better regulation council, and the Swedish bar association. By reviewing the governmental proposals (Regeringens proposition 2021/22:251) impact assessment, it can be stated that there is a lack of any calculations on the costs and benefit of the proposal, and is a qualitative analysis based on the opinions of the entities giving a statement on the proposal's impact. The discussion on the costs is only related to comments on their accommodation within existing financial frameworks.

The Swedish Finance Ministry has presented an extensive review on a better impact assessment in 2022 (Finansdepartementet 2022), which states that the quality of the impact assessments can be strengthened. It is further stated, how

the Swedish impact assessments have received reoccurring criticism from the Swedish national audit office, the Swedish agency for public management, and the organization for economic co-operation and development (OECD). The review (Finansdepartementet 2022) states how the committee's handbook (Ds 2000:1) clarifies the impact assessment requirements, and includes support regarding cost calculations, as well as notes how the impact assessment should begin early in the proses of government proposal preparation. The review (Finansdepartementet 2022) further states how the better regulation in Europe: Sweden 2010 report by OECD critic the lack of quantified benefits and costs in Swedish impact assessments, and how all significant impacts should be assessed, not only once relating to companies. It is further emphasized in the review (Finansdepartementet 2022) how the UK has ranked at the top of the OECD's country comparison of impact assessment work. The review points out how the UK's finance ministry, HM Treasury, is responsible for guidance on the impact assessments, including a template for the presentation of most important results. The summary of the assessment must include the comprehensive goals of the proposal, alternative proposals considered, and the results of a socio-economic analysis, including quantified and non-quantified consequences. The review (Finansdepartementet 2022) suggests that impact assessments must consist of an analysis of the proposal, including a description and calculation of the proposal's costs, revenues, as well as other relevant consequences. It is further stated how the assessments and calculations should be based on empirical data and be as realistic and well-founded as possible. The review (Finansdepartementet 2022) also notes that in case the effects cannot be calculated, the lack of calculations must be justified. Based on the review (Finansdepartementet 2022) on the quality of the impact assessment, the impact assessments need to be strengthened.

The reviewed information in this section of legislative impact assessment will aid in the suggestions given for better quality in future impact assessments relating to anti-money laundering and countering of terrorist financing legislations. The main giveaway from the information review in this subchapter is the need for a cost-benefit analysis in the impact assessments.

3 LITERATURE REVIEW

This chapter is the literature review of research on the topic focus of the thesis and Table 13 below presents an overview of the research articles used for the literature review.

Table 13 Research articles listed with main findings and results

Article & Author	Research questions	Main findings & Results
Just how effective is money laundering legislation?, 2008 Jackie Harvey	Evaluate the effectiveness of money laundering legislation. By investigating whether the diligent application and enforcement of these laws and regulations have a measurable impact on reducing money laundering activities.	Evidence shows the importance of reputation to institutions as a reason for absorbing the cost of AML compliance, nonetheless money laundering does not seem to be of much public concern. The rise in the number of SARs has been connected partially to the increases in the numbers of both prosecutions and convictions; however, it is noted that while both prosecutions and convictions per SAR have increased, they do remain at extremely low levels. The same observation is true of asset recovery.

<p>Anti-money laundering law and policy as a double edged sword, 2020 Norman Mugarura</p>	<p>Banks cannot be allowed to operate in a lawless environment; however, there is a need to ensure that businesses are able to operate with minimal regulatory interference.</p>	<p>The regulation of businesses AML and CFT actions imposes huge costs in poorer countries and should be funded by developed economies for some countries to easily operate desired International AML standards. Banks cannot have permission to operate in a lawless business environment, thus making money laundering an international and national security issue.</p>
<p>Anti-money laundering regulations and financial inclusion: empirical evidence across the globe, 2022 Isaac Ofoeda</p>	<p>Examine the impact of anti-money laundering (AML) regulations on financial inclusion using a comprehensive measure of AML regulations developed by the Basel Institute on Governance.</p>	<p>AML regulations promote financial inclusion across the globe, however these regulations stimulate financial inclusion below the threshold of AML regulations. On the other hand, above the thresholds, AML regulations have damaging effects on financial inclusion. AML regulations have a detrimental impact on financial inclusion for developed economies, whereas AML regulations are able to promote financial inclusion at all levels of AML regulations for African countries.</p>

<p>Financial sector development, anti-money laundering regulations and economic growth, 2022 Isaac Ofoeda, Elikplimi Agbloyor and Joshua Yindenaba Abor</p>	<p>Examines the influence of anti-money laundering (AML) regulations on the financial development-economic growth nexus around the world.</p>	<p>Financial development generally stimulates economic growth according to the research, whereas the authors find evidence of AML regulations' threshold effect on the finance-growth connection, with the impact of finance on growth being positive below the threshold value. Above the threshold, a negative influence is observed. AML regulations have a considerable detrimental impact on the finance-growth nexus over the threshold for developed countries. Whereas a positive but insignificant effect of finance on growth below the AML regulations threshold for African countries, while finance positively impacts growth above the AML regulations threshold.</p>
<p>Anti-money laundering regulations and financial sector development, 2020 Isaac Ofoeda, Elikplimi K. Agbloyor, Joshua Y. Abor, and Kofi A. Osei</p>	<p>A) Examine the effect of anti-money laundering regulations on financial sector development. B) Examine if this effect differs across developing and developed economies. C) Examine the nonlinearities in the anti-money laundering regulations-financial sector development nexus.</p>	<p>Evidence that anti-money laundering regulations generally promote financial sector development was found, but the positive effect is concentrated in developing economies. Evidence of the threshold effects of anti-money laundering regulations for the sample used was also found. The positive effect of anti-money laundering regulations on financial development is concentrated in countries below the threshold value of anti-money laundering regulations, and the countries are mostly developing countries. The findings suggest that strengthening anti-money laundering regulations would benefit developing countries.</p>

<p>Anti-money laundering: The world's least effective policy experiment? Together, we can fix it, 2020 Ronald F. Pol</p>	<p>Anti-money laundering is used as a case study to illustrate the benefits of cross-disciplinary engagement when major policy making functions develop separately from public policy design principles.</p>	<p>The anti-money laundering policy intervention has less than 0.1 percent impact on criminal finances, compliance costs exceed recovered criminal funds more than a hundred times over, and banks, taxpayers and ordinary citizens are penalized more than criminal enterprises.</p>
<p>Is the UK's anti-money laundering regime "worth the candle"? A tentative cost-benefit analysis, 2023 Peter Alan Sproat</p>	<p>Is the UK's anti-money laundering regime "worth the candle"?</p>	<p>When assessed against its original aims of combating drugs and organized crime, the tentative conclusion is that the UK's AML system does not appear to be worth the cost.</p>
<p>Money laundering in the modern crime system, 2021 Georgy Rusanov and Yury Pudovochkin</p>	<p>The role of money laundering in the modern crime system.</p>	<p>The established effective system of measures controlling the income of certain type of crimes, has money laundering has taken a leading role in the modern crime structure. It concluded that the most effective measure to combat money laundering, is to combat other types of crimes related to money laundering. It is also necessary to establish responsibility for the financing of other types of crimes, not only terrorism, since financing criminal activity though laundered money, which is then related to other criminal activity has become a way of expanding the criminal business.</p>

<p>The Economic Analysis of Regulation: A Response to the Critics, 2004 Robert W. Hahn</p>	<p>The Economic impact of regulation</p>	<p>In conclusion is it argued how scorecards and economic analysis have contributed to the study of social regulation. The tools illustrate that the cost-effectiveness of regulations vary and shows the inefficiency of regulations and how less is more. A significant part of regulations, are probable to fail a cost-benefit test, and that there is an issue with the quality of cost-benefit analysis.</p>
<p>The fight against money laundering: An economic analysis of a cost-benefit paradoxon, 2007 Geiger and Wuensch</p>	<p>Providing a stylized analysis of the laws governing the cost and benefit of AML efforts.</p>	<p>The measures in preventing money laundering in the financial system have to be evaluated based on their effectiveness to accomplish the proposed achievement. When defining benefits, it should be done in terms of the predicate crime, and cost-benefit analyses should be used. The measures should only be taken when the benefits exceed the costs, since the otherwise existing burden should be put on society and the economy.</p>

3.1 Impact and Effectiveness

According to Pol (2020), the ineffectiveness of the anti-money laundering agenda is the core problem in itself. The issues can be linked back to the failure of a vague and different effectiveness assessment of policies. The agenda has failed to prove effectiveness of anti-money laundering policies regardless of the amount of funds invested into anti-money laundering actions globally. The application of impact assessment and the effectiveness of anti-money laundering policies has not been able to accurately evaluate the situation and can thus be seen as a missed opportunity to further develop the actions and policies against money laundering. Pol (2020) continues to comment on the lack of suitable effectiveness metrics for the impact of anti-money laundering policies, thus playing a part in the lack of awareness and acceptance of the policies' failure. Based on these comments, further research should be conducted to determine whether it could be recommended, for example for Finland, to adopt some success metrics included in their impact assessment of anti-money laundering regulatory changes, to be able to reach a conclusive assessment strategy. Rather than only following the guidelines given by FATF, which according to Pol (2020) were absent of a clear plan of action to reach key objectives, it would be worth

considering development of a more valuable and effective framework for future impact assessments of the Finnish prevention of money laundering and terrorism financing unit. Rusanov and Pudovochkin (2021) state how experts have observed an increase in the percentage of money laundering after committing a predicate offense. Further, Rusanov's and Pudovochkin's (2021) research state how combatting money laundering would be most effective though the combatting of other criminal activity related to money laundering. It is also concluded by Rusanov and Pudovochkin (2021) that, money laundered from other criminal activities, used to finance criminal activity through expanding the criminal business. Kemal (2014) finds an inverse effect of employee training and money laundering, meaning that an increase in employee training shows to have decreased money laundering. Kemal (2014) further finds an inverse impact on money laundering through suspicious transaction reporting, as well as customer record keeping.

According to the research results of Ofoeda et al. (2020), even though the anti-money laundering regulations promote the development of the financial sector, can excessive and too strict anti-money laundering regulations on the other hand also impede on the development of the financial sector. Based on this we can clearly see the need to find an equilibrium between the two aims, to reach cost-effective and efficient anti-money laundering regulations. Based on the research of Ofoeda et al. (2022), which explores the threshold effect, are their main findings that anti-money laundering regulations have a negative and harmful impact on the growth of financing, when exceeding the developed countries threshold. Nevertheless, Ofoeda et al. (2022) still find that anti-money laundering regulations are able to contribute to economic growth. Suggestions from Ofoeda et al. (2022) are that countries should create policies which enhance transparency of finance as well as standards, and furthermore contribute towards transparency and accountability of the public sector. In addition, the policies should be able to lower the legal risks and political risk, in addition to which bribery and corruption should be prevented. It can be concluded that it is vital to ensure the effectiveness of regulations through thorough impact assessments. Through suitable methodologies can regulators implement anti-money laundering regulations cost-effectively, and furthermore create cost-effective anti-money laundering compliance (Ofoeda et al. 2022). In addition, their results show that the growth effectiveness of anti-money laundering regulations on finance is nonlinear. Based on this can we see the importance of structured and cost-effective regulations, to not have the opposite effect by exceeding the threshold.

Furthermore, Ofoeda (2022) does comment on the need for financial inclusion as a part of the discussion of anti-money laundering regulations impact. Since money laundering and terrorism financing is a global issue and has a cross-border reach on societies and economic structures, the impact issue should be looked at from a larger perspective. As Ofoeda (2022) reflects, there is need to make policy changes to improve the inclusivity in finance, since according to Demirgüç-Kunt et al. (2022) in the Global Findex Database 2021 did only 76 % of adults globally have access to a bank account. This means that over 20 % do not have access to a bank account, which could be seen as problematic for societal

activities. Based on Ofoeda (2022) there is a link between the anti-money laundering regulations and financial inclusion globally, but as results from Ofoeda et al. (2020) indicate, there is also a need for an equilibrium in this context. The results of Ofoeda (2022) show that anti-money laundering regulations further contribute to inclusivity in finance through building trust and confidence in the financial system but can have a negative impact at a certain point, through costs these regulations impose on banks.

According to the research conducted by Sproat (2023), the number of drug deals or level of organized crime has not decreased through the implementation of anti-money laundering system and the police work conducted, which strongly suggests that the UK's anti-money laundering system has not been effective or have had an impact according to its intended purpose. To further discuss the issue of the effectiveness of money laundering regulations in the UK, it is relevant to note the research of Harvey (2008), where it is emphasized how the reputation of institutions is a driving factor of covering anti-money laundering costs. However, this is not seen to be a general concern by the public. Harvey (2008) further argues for the complicated association between anti-money laundering compliance and its reduction, through the regulation generating an externalized solution. Discussing the costs and benefits further, Harvey (2008) does mention how compelling the argument is for the removal of government intervention and thus letting the free market to regulate instead, since 1) the benefits cannot be shown to exceed the costs, 2) the impact on money laundering activity is minimal, 3) there has been no evidence of the collapse of the banking system. Importantly, this can be argued against based on other research showing that anti-money laundering regulation is important for the financial development and stability of a country. Referring to Harvey (2008) and to Franks et al. (1998), where they cite Lomax (1987) statement of a financial industry's biggest threat being overreaching or inappropriate regulations. Based on this it can again be concluded that it is of importance to do research on the expected effectiveness and impact any given level of regulation has, and in this case the impact of anti-money laundering regulations.

The imminent problem of legislators, regulatory bodies, and supervisory authorities is to keep up with the criminal actors, and their constantly changing ways to operate. This is highlighted in the research by Mugarura (2020), who comments on the importance of regulators understanding the main objective of money laundering, which is to recycle the illegally obtained money into the financial system, with the intent of making it appear legal in the end. Due to criminals seeking out loopholes in the financial systems, countries and sectors with weaker anti-money laundering regulations and prevention systems are an obvious target, according to Mugarura (2020). Thus, is it important for regulators to keep up with the changing money laundering approaches in order to protect the financial system, the economy and the society in the end. This again highlights the importance in understanding if the current regulatory measures taken, have been able to have an impact on the criminal money laundering actions, or if it has created more harm than good in the end.

Conclusively based on research discussed above, the question of whether anti-money laundering and terrorism financing regulations have the right impact

on society and the financial systems is clearly highlighted. As stated previously, this is raising the need for further research on the impact of anti-money laundering and terrorism financing, and how the assessment of the impact should be further developed for better and relevant results of the regulatory changes.

The impact of regulation preventing money laundering and terrorism financing should be positive on many different sections of the society and be able to further promote economic growth, financial development, in addition to not having a negative impact on business, their employees and customers, competition, legal entities, the supervisory authorities, or private citizens. If a positive impact of the anti-money laundering and prevention of terrorism financing regulations cannot be identified, policymakers and regulatory bodies need to conduct a thorough assessment of the situation and relevant legislation to improve their operations.

3.2 Cost-benefit analysis in anti-money laundering regulations

The question raised by Saperstein et al. (2015) is, why is there a lack of the cost-benefit analysis, since it is not clear if the regulations set by the regulators are actually beneficial in terms of the costs not exceeding the benefits of set regulations. As also Ferwerda (2018) comments, the cost-benefit analysis is a standard in most fields of policy making but is mostly missing in anti-money laundering policies. Saperstein et al. (2015) suggest that in order to regulations to achieve the preferred outcome, the situation could require a specifically adapted cost-benefit analysis. Saperstein et al. (2015) further comment on how researchers have been advocating an existence of the cost-benefit analysis for the purpose of an optimal regulatory system. By lacking an estimation of the benefits and comparing them against the alternative options, Saperstein et al. (2015) state that the regulations are at risk of not being suitable for their purpose and unnecessarily taxing on different parties involved in the anti-money laundering and prevention of terrorism financing work. Even if the purpose of the regulations is of good nature, it does not mean that they are able to create the wanted outcome. As stated by Saperstein et al. (2015), the fact that regulators continue to rely on punishment for the banks in case of lack of compliance with regulations and standards, can result in more harm than good. Saperstein et al. (2015) continue by commenting that legal scholars have been advocating for the cost-benefit analysis for a long time. By requiring a qualitative and quantitative assessment of costs and benefits, regulators would be able to make a better analysis of the impact of their actions and make an individualized assessment of the regulations positive and negative impacts (Saperstein et al. 2015). Hahn (2004) concludes that for systematically assessing details and to get a bigger picture, are quantitative tools useful. Furthermore, can quantitative cost-benefit analysis and cost-effectiveness analysis support regulations in suggestions of eliminating regulation or the need to change regulations according to Hahn (2004). Banks have for example been subjected to liabilities of compliance failures, in addition

to huge compliance costs, but the total benefit of these costs remains unclear Saperstein et al. (2015).

The research of Geiger and Wuensch (2007) carried out a stylized cost-benefit analysis of anti-money laundering laws and regulations. Geiger and Wuensch (2007) give a set of questions to be considered, without making any specific recommendations. Firstly, effectiveness to achieve the set goals should judge the anti-money laundering measures in the financial system based on Geiger and Wuensch (2007) conclusion. Secondly, Geiger and Wuensch (2007) suggest that benefits should be defined related to predicate crime, to fight against the abuse of the financial system by criminals is not an achievable goal. Geiger and Wuensch (2007) continue by stating that a limit for accepted direct costs and collateral damage should be set, and the cost-benefit analysis performed, and alternatives considered. Lastly, Geiger and Wuensch (2007) state that the measure considered, should only be introduced into effect only in the case of the benefits exceeding the costs, since otherwise a burden could be placed on the society and its economy without receiving desired results. Ferwerda (2018) considers two different ways of calculation, the historical approach, and the current approach. The approaches presented by Ferwerda (2018) differ from the historical approach comparing the costs of establishing anti-money laundering policy to the amount of derived benefit from said policy, and the current approach comparing the costs which could be saved if the current anti-money laundering policy was discontinued against the benefits which would thus be lost. Ferwerda (2018) continues by stating how the historical approach could review if setting up anti-money laundering and combating terrorism financing policy actions has been beneficial, and the current approach furthering if the current efforts should be continued or not. Based on interviews and discussions, as well as a literature review, Ferwerda (2018) was able to identify the most significant components of a cost-benefit analysis for anti-money laundering. Ferwerda (2018) lists the costs as follows: ongoing policy making, sanction costs (repressive), financial intelligence unit, supervision, law enforcement and judiciary, duties of the private sector, reduction in privacy, efficiency costs for society and the financial system. Further Ferwerda (2018) lists the benefits as follows: fines (preventive and repressive), confiscated proceeds, reduction in the amount of money laundering, less predicate crimes, reduced damage effect on real economy, less risk for the financial sector. In conclusion does Ferwerda (2018) state that based on their estimations, are the reporting sector and supervisory entities responsible for 84 % of the costs.

4 DATA AND METHODOLOGY

The basis of this chapter is to present the data and methodology used in this master's thesis for the purpose of analysing the current anti-money laundering and terrorism financing regulations cost-effectiveness, as well as legislative impact on money laundering and terrorism financing activities. Furthermore, for the analysis and improvement of impact assessments relating to anti-money laundering and terrorism financing legislations.

The SRs, sentences, frozen and seized assets are presented, and we show how they have changed over time across the selected Nordic countries. According to Harvey (2008) research was the most reliable measure for the effectiveness evaluation in anti-money laundering and combating terrorist financing legislation, based on suspicious activity reports (SAR), prosecution and asset recovery, thus will the datasets be included in this master's thesis. The data used in the thesis is based on money laundering activity recorded by the Finnish Financial Intelligence Unit, and from various official statistics available from the other 3 Nordic countries chosen for comparative purposes. The thesis thus uses a quantitative data analysis, to be able to make an assessment on the effectiveness of the regulations.

4.1 Data Description

Data on the number of Suspicion Reports (SRs), transactions recorded in the money laundering register, information disclosure, freezing orders, and proceeds of crime, can be found in the annual report of the National Bureau of Investigation's Financial Intelligence Unit (Rahanpesun selvittelykeskus). Crimes brought to the attention of the authorities in the money laundering category can also be found on the Statistics Finland register. Comparable data sets were acquired by the author through investigation of official statistics for the three other Nordic countries, Sweden, Norway, and Denmark. The data on Swedish SRs can be found in the annual report of the Swedish National Bureau of Investigation's Financial Intelligence Unit (Finanspolisen). The same data can

be found in the Norwegian National Bureau of Investigation's Financial Intelligence Unit (Økokrim). Finally, Danish data were acquired from the reports of the Danish National Bureau of Investigation's Financial Intelligence Unit (Danmarks Finansielle Efterretningsenhed 2023). The data regarding assets recovered for the specified countries can also be found on the respective countries' annual reports, as well as the Swedish Prosecution Authority's annual report (Åklagarmyndighetens årsredovisning). The data regarding Finnish sentences regarding money laundering and terrorism financing can be found on Statistics Finland database. The data regarding the Swedish sentences can be found on the Swedish National Council for Crime Prevention (Brå) website, whereas the Norwegian sentences are found on Statistics Norway database. The Danish sentences can be found in the annual report of the Danish National Bureau of Investigation's Financial Intelligence Unit (Danmarks Finansielle Efterretningsenhed 2023). The exact data sets used in this chapter can be found in tables within APPENDIX 1.

4.1.1 Suspicious activity reports

To highlight the importance of suspicious activity reports in the fight against money laundering and terrorist financing, some important factors brought up by Europol in their report on converting financial intelligence into greater operational impact, will be considered before presenting the data of suspicion reports. The Europol (2017) report on converting suspicion to action, states that since 2006 has the average fraction of further investigated suspicious transaction reports (STRs) out of those collected in total not changed from approximately 10 %. The report by Europol (2017) shows how beneficial STRs are in the investigation of money laundering, as well as the overall value of financial intelligence. Europol (2017) further states how financial intelligence is an investigative tool, which provides important information on criminals' activities, and thus does STR reporting do more than exist as a deterrent. Financial intelligence is also an element in seizures and confiscations according to Europol (2017). Europol (2017) also highlights how cooperation between all involved entities including the public and private sectors, shows benefits in tackling financial crime. Further, re-directing resources of the AML/CFT regime to a more targeted approach could result in greater benefits.

When discussing suspicious activity reports, we need to consider the different types of reports obliged entities are required to file a report on to the investigative authority, or other responsible entity. According to the Finnish police (Poliisi 2023) are obliged entities obligated to report suspicious business transactions (SBT). According to the Swedish police (Polisen 2023) are obliged entities required to report SBT's and make suspicious activity reports (SAR). Based on the annual report of the Norwegian Financial Intelligence Unit's (Økokrim 2022) are their reports based on received reports on suspicious circumstances (MT). Based on the Danish Financial Intelligence Unit's annual report (Danmarks Finansielle Efterretningsenhed 2023) is their reporting based on three different categories, suspicious transaction reports (STR) reports of transactions with a possible money laundering suspicion, suspicious activity reports (SAR) reports on

suspicious activity, conduct event, which doesn't include transactions, and terror financing reports (TFR) reports on suspicious transactions such as transaction to and from high-risk countries. Further in this master's thesis will all of these reports be discussed using the same term: suspicion reports (SR).

According to the Finnish Financial Intelligence Unit's annual report (Keskusrikospoliisi 2023) they received during 2022 a total of 230 171 suspicion reports, and almost 37 % of these were done by cryptocurrency service providers. The number of suspicion reports was the second largest amount ever received during a year. The main service provider categories which reports were received from, were general payment brokerages including currency exchange, credit and financial institutions, and cryptocurrency service providers. According to the annual report (Keskusrikospoliisi 2023) was the number of received suspicion reports in 2022 significantly smaller than the number of 3 692 641 suspicion reports in 2021. Based on the annual report (Keskusrikospoliisi 2021) was the number of suspicion reports in 2020 was 62 041, and in 2019 the number of suspicion reports were 66 460. According to the annual report (Keskusrikospoliisi 2023) is the decrease in suspicion reports between 2021 to 2022 related to the sudden rise in numbers between 2020 and 2021, which was due to 98,35 % being from cryptocurrency service providers. Even though we see a decrease of almost 94 % in the total amount of suspicion reports between 2021 and 2022, is there actually an increase of 271 % between the number of suspicion reports in 2020 and 2022. The data between 2018 and 2015 can be found on the annual reports (Keskusrikospoliisi 2021, 2018).

Based on the Swedish Financial Intelligence Unit's annual report (Polismyndigheten 2023) is it reported that they received 45 113 suspicion reports during 2022, which is slightly over 20 % more than the previous year's 37 528 number of suspicion reports. 75 % of the suspicion reports in 2022 were received from banks, 15 % from the rest of the financial sector, and 9 % from the gambling sector. The annual report explains this to be mostly due to reports from the banking sector increasing a little over 20 %. Another increase was seen in reports from the gambling sector and explained with an increase in training from the sector. The total increase was 53 % from the number of 24 505 suspicion reports in 2020 to the 37 528 in 2021. The increase between 2019 number of suspicion reports of 21 709 and 2020's 24 505 was only 13 %, and the rise between the number of 19 306 suspicion reports in 2018 and 2019 was only 12 %. The data on Swedish suspicion reports between 2015 and 2017 can be found on the annual report (Polismyndigheten 2020) of 2019.

The Norwegian Financial Intelligence Unit's annual report (Økokrim 2022) shows that during 2022 did banks, brokers mainly including real estate agents, and payment processing businesses produce 91 % of the year's suspicion reports. Banks produced over 13 600 reports, and both brokers mainly including real estate agents, and payment processing businesses produced over 2 000 reports each. The last 9 % of the reports were produced by other reporting obligated entities. During the past five years the number of reports has been steadily increasing. The number of reports rose 20 % between 2021 and 2022, which was still less than the rise between 2020 and 2021 (equaling 30 %). The previous year it only rose 10 % between 2019 and 2020, and between 2018 and 2019 only 7 %. The total

amount of reports in 2022 was 19 783, in 2021 the number was 16 513, in 2020 it was 12 701, in 2019 it was 11 539, and in 2018 the number of SAR's reports was 10 748. The data for 2016 and 2017 can be found on the trend report by the Norwegian Financial Intelligence Unit (Økokrim 2021).

Denmark's Financial Intelligence Unit shows in their annual report for 2022 (Danmarks Finansielle Efterretningsenhed 2023) that during 2022 they received a total of 89 783 suspicion reports. The largest number of suspicion reports were received from banks, which was 75 % of the total of reports, and from gambling service providers it was 15 % of the total of reports. In 2021 the total number of suspicion reports were 70 449, which was less than the 73 447 number of reports in 2020. The number of reports in 2020 was 37 % higher than in 2019 when the number of received reports were 53 454, and the number in 2019 was 49 % higher than the number 35 768 number of reports received in 2018, based on the annual report of the Danish Financial Intelligence Unit in 2020 (Danmark finansielle efterretningsenhed 2020). The data for number of SRs for 2016 and 2017 are gathered from the Danish financial Intelligence Unit (Danmarks Finansielle Efterretningsenhed 2022) annual report.

The total sum of SRs in Finland between 2015 and 2020, in Sweden between 2015 and 2022, and in Norway and Denmark between 2016 and 2022 can be seen in Figure 3 below. Finland has been excluded for 2021 and 2022 from Figure 3 due to the number of SRs being so high, that the other years and countries would not be seen clearly. SRs between 2021 and 2022 including all four countries, are instead presented in the Figure 4. When looking at Figure 3 and Figure 4, it can be seen that Finland has the largest reported numbers of SRs except for in 2020, where Denmark has over 10 000 more SRs than Finland. The lowest number of SRs can consistently be seen for Norway, where the number has made only a slow increase each year. For Sweden the number of SRs can be seen to steadily increase each year, and the same applies to Denmark (except for 2021 when, the number decreased slightly). For Finland the number fluctuates more from year to year. The SRs of Sweden, Norway, and Denmark have been mostly making a steady increase during the years, whereas Finland's numbers are more varying each year with declines and increases, but the longer 8-year data shows an increasing overall trend.

An important remark to note regarding the SR's is the spike between the Finnish SR numbers between 2018 and 2019, which could be linked to the Danske Bank money laundering scandal in 2018 (SVT 2023). The same could be pointed out for the Swedish SR numbers increase between 2019 and 2020, after the Swedbank money laundering scandal in 2019 (SVT 2023). It could be argued that these money laundering scandals of banks may have affected the numbers of SR's due to banks and other supervised entities increasing their AML actions and with their, know your customer (KYC) and customer due diligence work, to avoid another money laundering scandal.

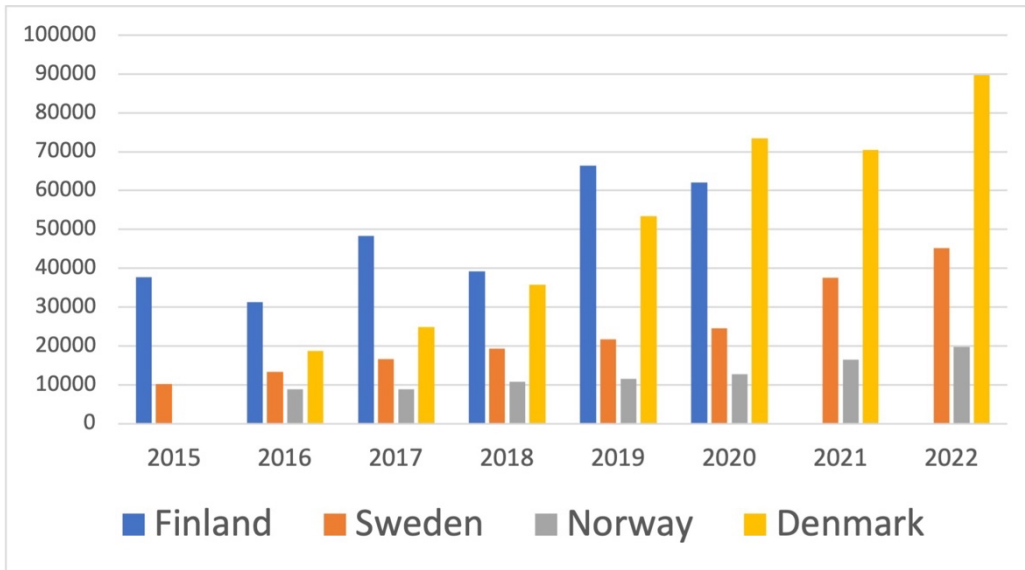


Figure 3 SRs for Sweden, Norway, and Denmark, Finland

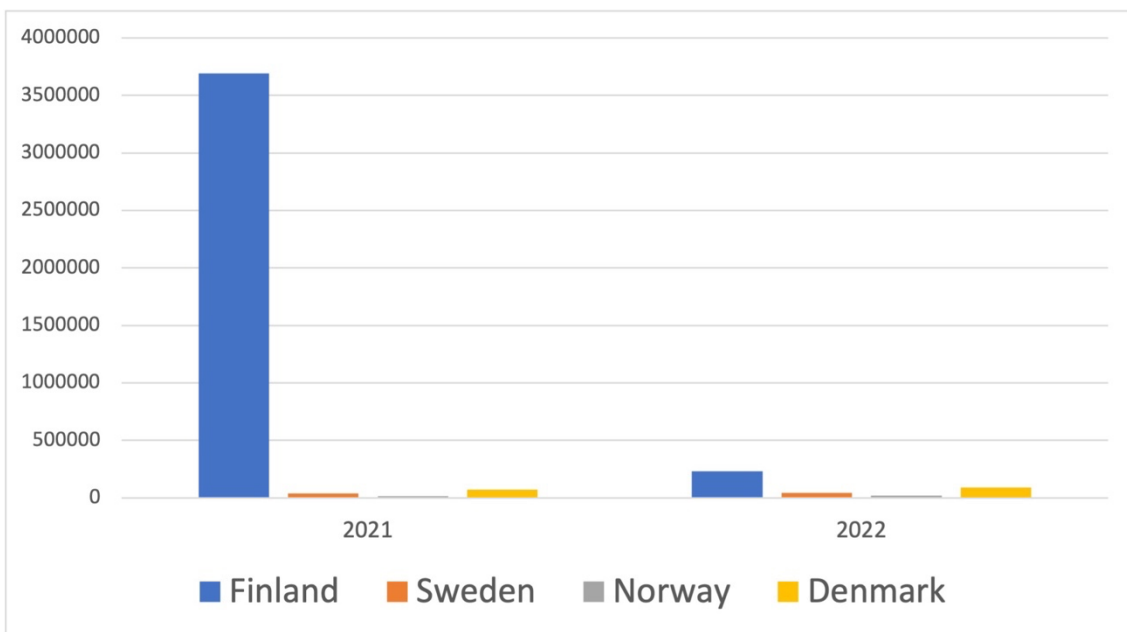


Figure 4 SRs for 2021-2022 in Finland, Sweden, Norway, and Denmark

4.1.2 Sentences in relation to Money laundering

According to Statistics Finland database¹³ there were in 2018 a total of 284 sentences in Finland by district court and offense (district courts and courts of appeal

¹³ https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin_syyttr/stat-fin_syyttr_pxt_13r7.px/13r7 -- Sentences by district court and offence (district courts and courts of appeal as first court instance), 2018-2022, Information: Number of penalties, Year: 2022-2018, Court: Total, Principal offence: Money laundering 32:6§1/1-2 / Attempted money laundering 32:6§2 / Aggravated money laundering 32:7§1/1-2 / Attempted aggravated money laundering 32:7§2 / Conspiracy for the commission of aggravated money

as first court instance), in the following categories: Money laundering 32:6§1/1-2, Attempted money laundering 32:6§2, Aggravated money laundering 32:7§1/1-2, Attempted aggravated money laundering 32:7§2, Negligent money laundering 32:9§, and Money laundering violation 32:10§. In 2019 the number of total sentences was 309, in 2020 256, in 2021 343, and in 2022 379. Between 2018 and 2022 does Money Laundering sentences cover between 55 % and 63 % of the total number of sentences.

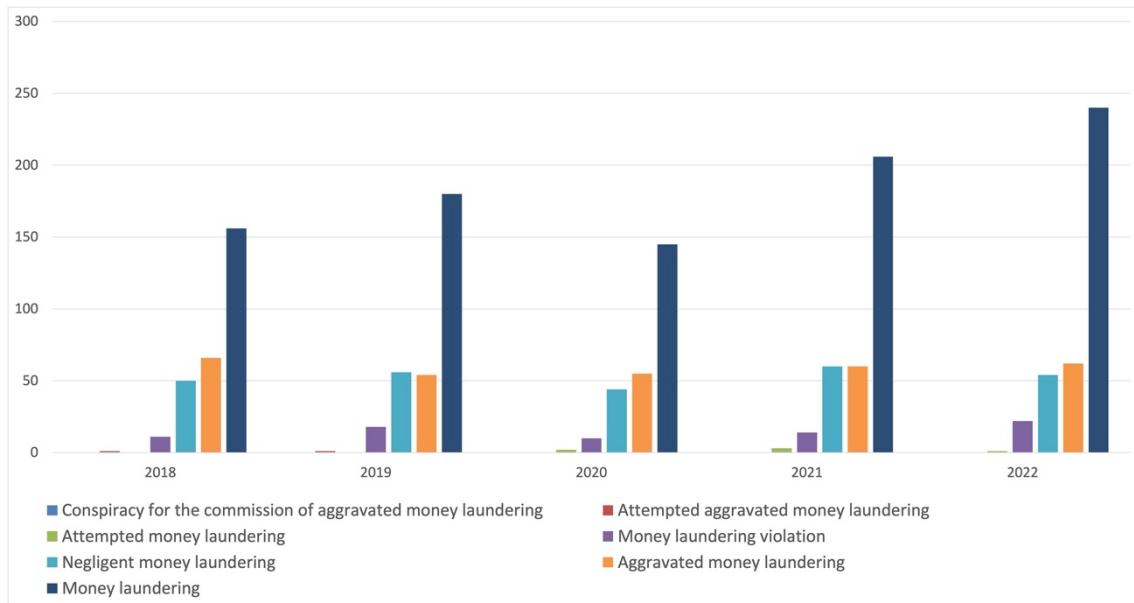


Figure 5 Money laundering sentences in Finland 2018–2022

In Figure 6 the money laundering offences known to authorities which include Police, customs or border guard, and offences solved in Finland 2013–2022¹⁴. There can be seen a clear increase in both the offences known to authorities and the offences solved between the years presented.

laundrying 32:8§ / Negligent money laundrying 32:9§ / Money laundrying violation 32:10§, Sentence: Persons sentenced in court (number).

¹⁴ https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin_rpk/stat-fin_rpk_pxt_13gw.px/13gw -- Offences recorded and their solving by offence heading according to the investigating authority, 2006–2023, Information: Offences known to the authorities (number)/Solved offences total (number), Year: 2022–2006, Offence heading: Money laundrying 32:6§1/1-2 / Attempted money laundrying 32:6§2 / Aggravated money laundrying 32:7§1/1-2 / Attempted aggravated money laundrying 32:7§2 / Conspiracy for the commission of aggravated money laundrying 32:8§ / Negligent money laundrying 32:9§ / Money laundrying violation 32:10§ / Violation of the obligation to report money laundrying (503/2008).

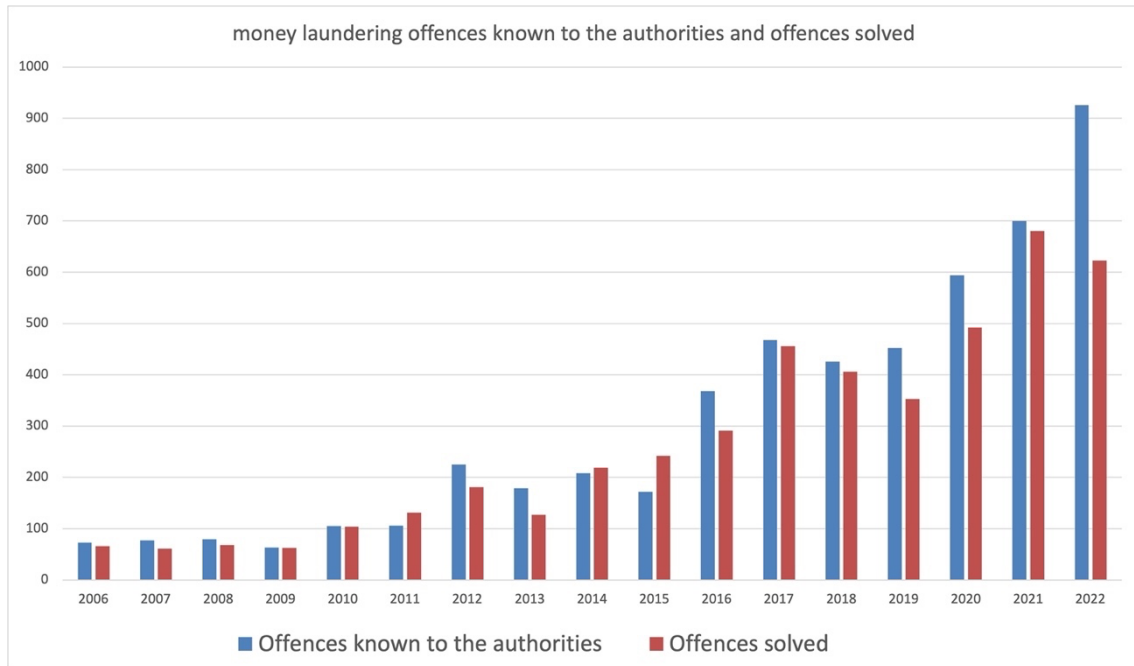


Figure 6 ML offences known and solved in Finland 2013–2022

In Figure 7 presented below the persons sentenced in court¹³ and the imputable offences¹⁵ in court relating to money laundering in Finland between 2018 and 2022 can be seen. The imputable offences are according to the Finnish Financial Intelligence Unit report on money laundering crimes in legal practice (Keskusrikospoliisi 2022) an offence where evidence of a pre-crime has been shown by the prosecutor, even though details of the crime or the perpetrator cannot be found out. Further, the funds can be found to have originated from criminal activity, so there wouldn't be any reasonable doubt of an illegal origin. Based on this these imputable offences are used in the analysis to represent the prosecutions. Presented in Table 14 the turnover rate of imputable offences in court to persons sentenced in court between 2018 and 2022 can be seen. The rate varies between 49 % and 65 %.

¹⁵ https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin__syyttr/stat-fin_syyttr_pxt_13r7.px/13r7 -- Sentences by district court and offence (district courts and courts of appeal as first court instance), 2018-2022, Information: Number of penalties, Year: 2022-2018, Court: Total, Principal offence: Money laundering 32:6§1/1-2 / Attempted money laundering 32:6§2 / Aggravated money laundering 32:7§1/1-2 / Attempted aggravated money laundering 32:7§2 / Conspiracy for the commission of aggravated money laundering 32:8§ / Negligent money laundering 32:9§ / Money laundering violation 32:10§, Sentence: Imputable offences in court (number).

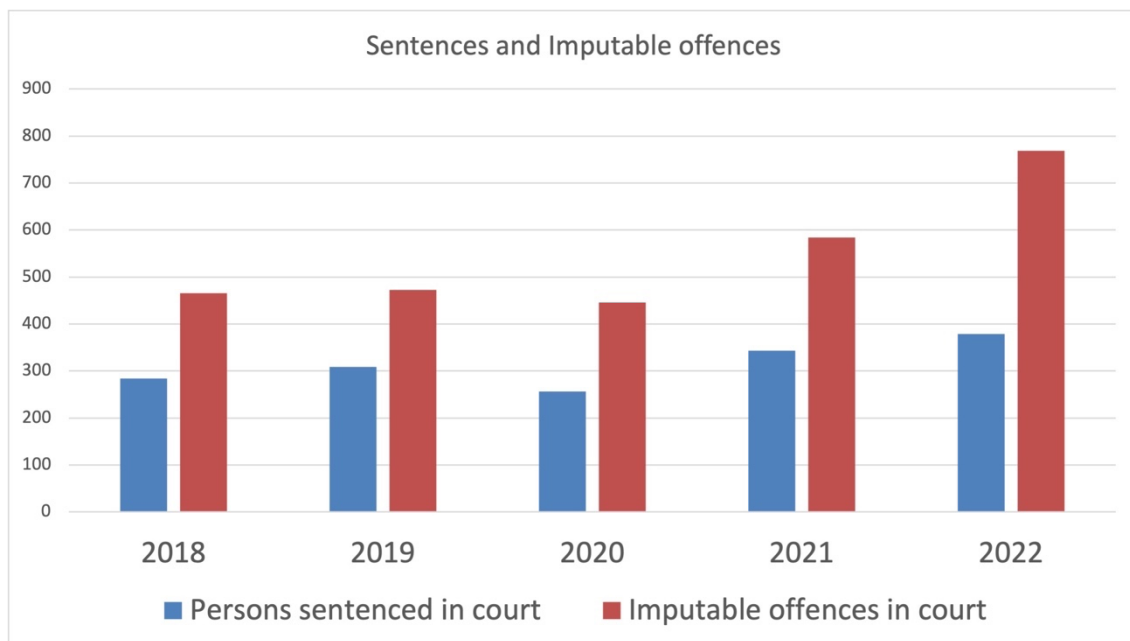


Figure 7 ML sentences and imputable offences in Finland

The statistics of sentences relating to money laundering activity in Sweden between 2015 and 2022 were obtained from Brottsförebyggande rådet (Brå)¹⁶. Brå¹⁷ corresponds to the Swedish National Council for Crime Prevention and is an agency under the Ministry of Justice and functions as a knowledge centre for the criminal justice system. Prosecution decisions after main offense and main penalty are presented in the tables downloaded for each year between 2015 and 2022, where the sentence data relating to money laundering in Sweden used in this thesis can be found.

A clear increase of total sentences relating to money laundering over the years can be seen and is presented in Figure 8. All conviction decisions, by principal offense and principal sanction can be found in the data set and is sectioned into sentences based on the money laundering legislative sections. The data shows sentences based on § 3 Money laundering offense, § 4 Money laundering offense, § 5 Money laundering crime, serious crime, § 6 Money laundering misdemeanour, and § 7 Money laundering. Between 2017 and 2022 were sentences based on section § 3 Money laundering offence the highest percentage of the total sentences relating to money laundering in Sweden.

¹⁶ <https://bra.se/statistik/kriminalstatistik/personer-lagforda-for-brott.html> Personer lagförda för brott, Tabeller, Lagföringsbeslut efter huvudbrott och huvudpåföljd, 2015–2022, Alla, Hela landet, VISA, Ladda ner ditt urval som excelfil.

¹⁷ Brå. About Brå. Retrieved March 2, 2024, from <https://bra.se/bra-in-english/home/about-bra.html>

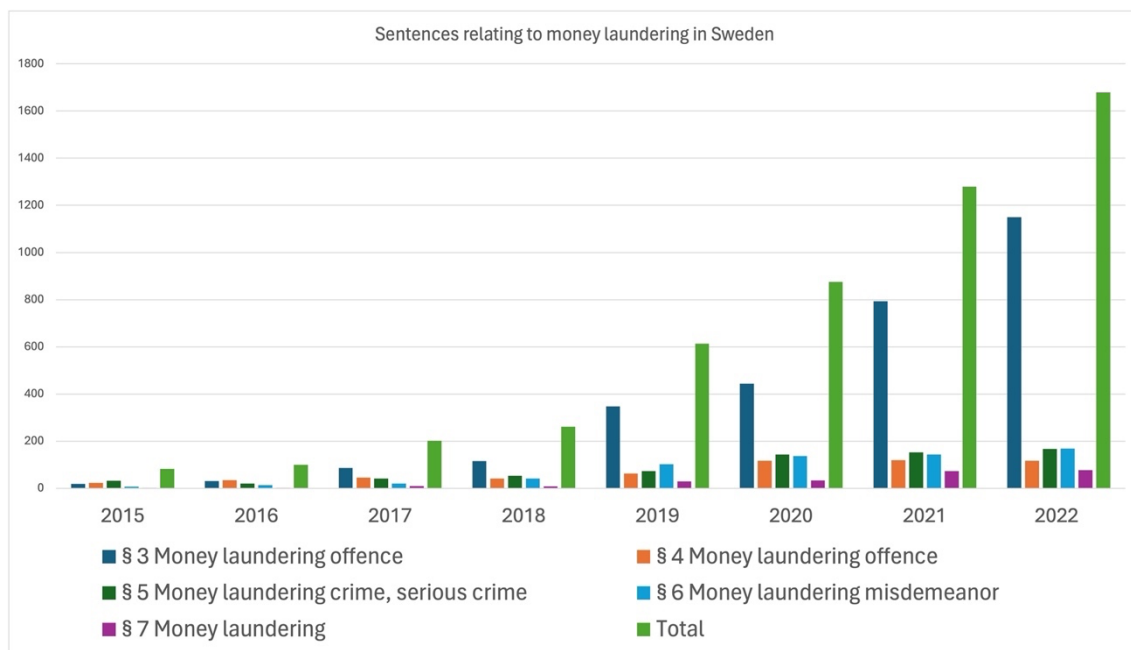


Figure 8 Sentences relating to money laundering in Sweden for 2015-2022

Statistics of sentences relating to money laundering activity in Norway were obtained from Statistics Norway (13579: Penal sanctions and criminal counts, by type of sanction, type of principal offense, contents and year) between 2019 and 2022¹⁸. The same data between 2015-2018¹⁹, chosen form (10622: Sanctions, by type of sanction, type of principal offense, contents and year). The Norwegian data is only divided into money laundering sentences and aggravated money laundering sentences. Only for 2017 was the number of money laundering sentences higher than the number of aggravated money laundering sentences. According to Økokrim (2022) annual report the average conviction rate was 86 % for 2020-2022 of cases brought to court. In 2020 the conviction rate was 77 %, in 2021 the rate was 96 %, and in 2022 the rate was 85 %. The annual report also states that the aim for the conviction rate over time to be between 80 % and 85 %.

¹⁸ <https://www.ssb.no/en/statbank/table/13579/> Penal sanctions, Contents: Penal sanctions, Year: 2022-2019, Type of sanction: All type of sanctions, Subtype of sanction: Total, Type of principal offence: Type of offence 2015-: Receipt of stolen property and money laundering/Money laundering, total/Money laundering/Aggravated money laundering/Other or unspecified receipt of stolen property and money laundering.

¹⁹ <https://www.ssb.no/en/statbank/table/10622/> Penal sanctions, Contents: Penal sanctions, Year: 2018-2015, Type of sanction: All type of sanctions, Type of principal offence: Type of offence 2015-: Receipt of stolen property and money laundering/Money laundering, total/Money laundering/Aggravated money laundering/Other or unspecified receipt of stolen property and money laundering.

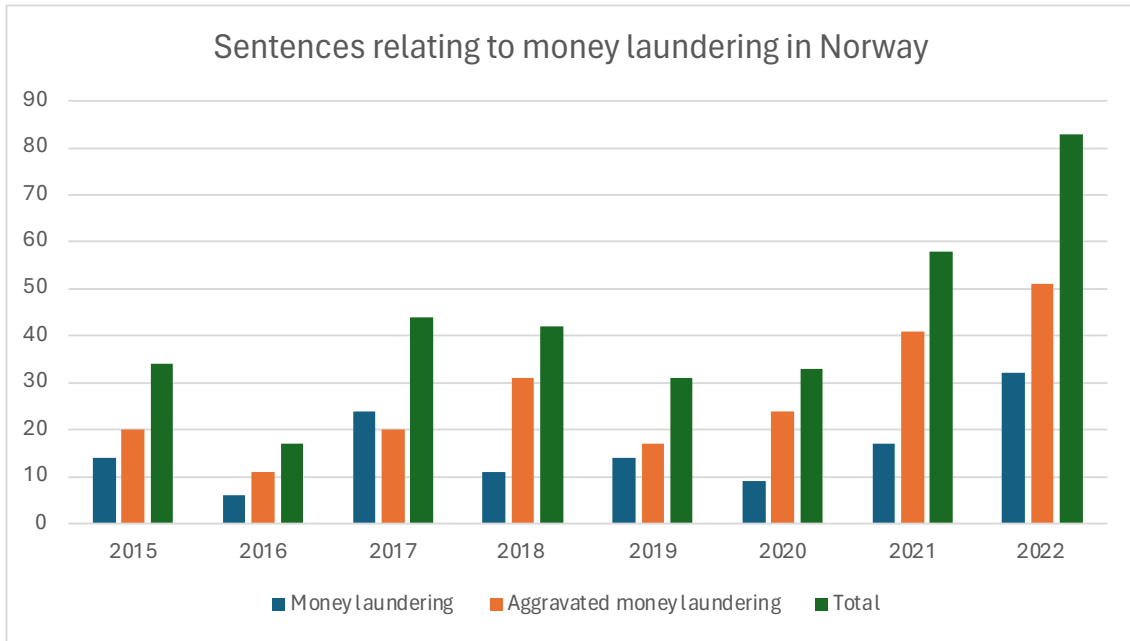


Figure 9 Sentences relating to money laundering in Norway for 2015-2022

Statistics of sentences relating to money laundering activity in Denmark between 2018 and 2022 is based on the Danish FIU's annual report (Danmarks Finansielle Efterretningssenhed 2023), where the number of sentences is divided into money laundering and aggravated money laundering sentences. As seen in Figure 10 below, has the number of sentences only taken off in 2021 with a total of 493 sentences, and made a steep rise in 2022 with a total of 2 716 sentences.

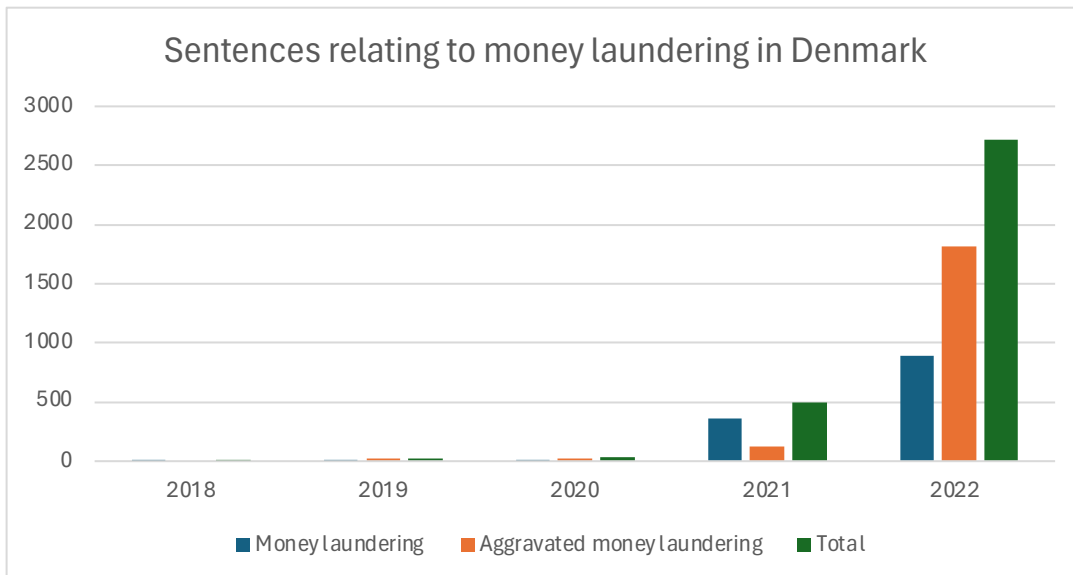


Figure 10 Money laundering sentences in Denmark

Statistics of total sentences relating to money laundering activity in Finland, Sweden, Norway, and Denmark between 2015 and 2022 can be seen in Figure 11

below. It can be clearly seen how the number of sentences is quite stagnant in Finland and Norway, whereas the numbers of sentences have been evenly rising in Sweden and regarding Denmark making a noticeable spike in 2021 and an even higher spike in 2022.

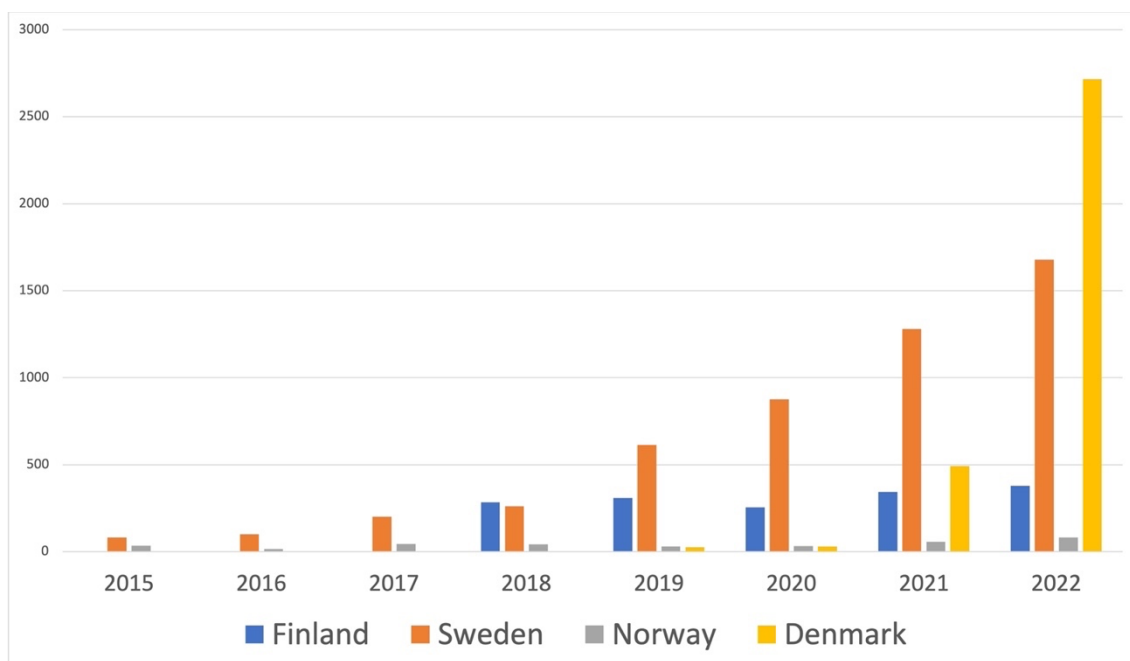


Figure 11 ML sentences in Finland, Sweden, Norway, and Denmark

4.1.3 Frozen and Seized assets

Frozen and seized assets relating to money laundering activity in Finland between 2018 and 2022 can be found in Figure 12 below. The annual reports from the National Bureau of Investigation's Financial Intelligence Unit (Keskusrikospoliisi) of 2021, and 2023 shows the data of frozen assets, seized assets, and the seized assets %. The number of freezing orders can be found of the annual report for 2021 and 2022 (Keskusrikospoliisi 2022a, 2023). Unfortunately, the number of seizure orders regarding Finland was not recorded in the earlier annual reports, but according to the Financial Intelligence Unit Legal Officer it will be recorded in the annual report released this year, which is supports further studies on this topic. It was also commented in Finland's country report that the statistics regarding frozen, seized and confiscated property were not available in a comprehensive and reliable way. It needs to be noted and should be kept in mind throughout, that the seizure orders can be related to cases and SRs from earlier years as well.

In Figure 12 the frozen assets in euros as well as seized assets in euros are presented. The seized assets % refers to how much of the frozen assets has been seized. In 2020 61,44 % of the frozen assets were seized but in 2021 only 26,26 %. As seen in Figure 13, the highest number of freezing orders were made in 2020 and the number has been declining since. In Figure 14 the average of frozen assets € per number of freezing orders between 2018-2022 in Finland is presented. This

is calculated simply by dividing the frozen assets € by the number of assets freezing orders, but it should be noted that the actual number of the assets frozen based on each order varies in reality. Figure 14 shows that in 2020 the amount of seized assets per freezing order was the second lowest while 2022 had the lowest amount.

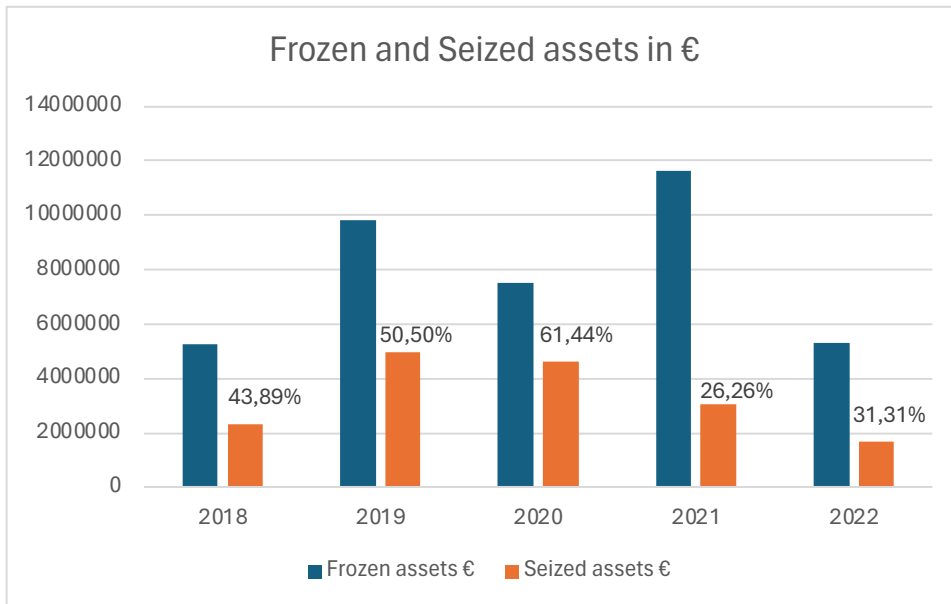


Figure 12 Frozen and seized assets relating to money laundering in Finland

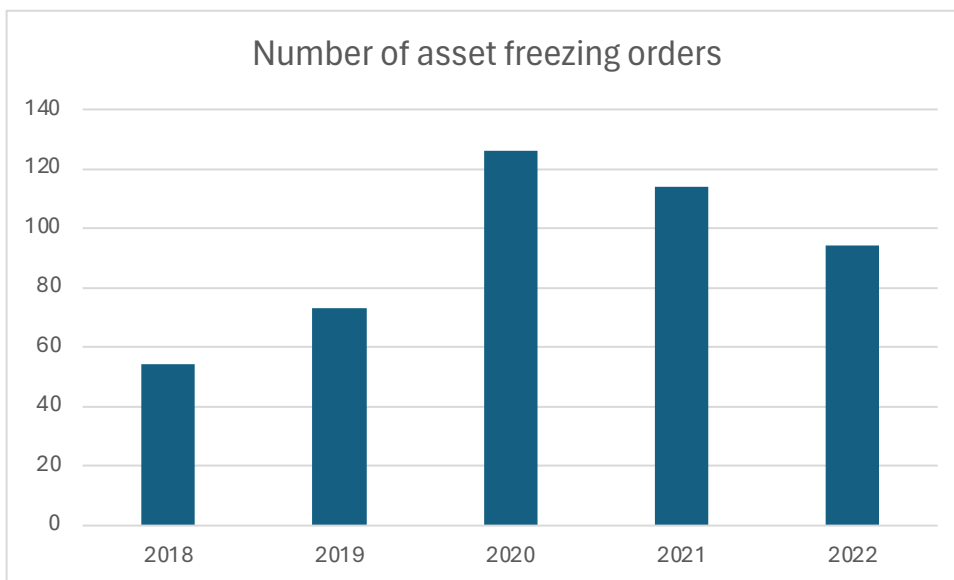


Figure 13 Asset freezing orders relating to money laundering in Finland

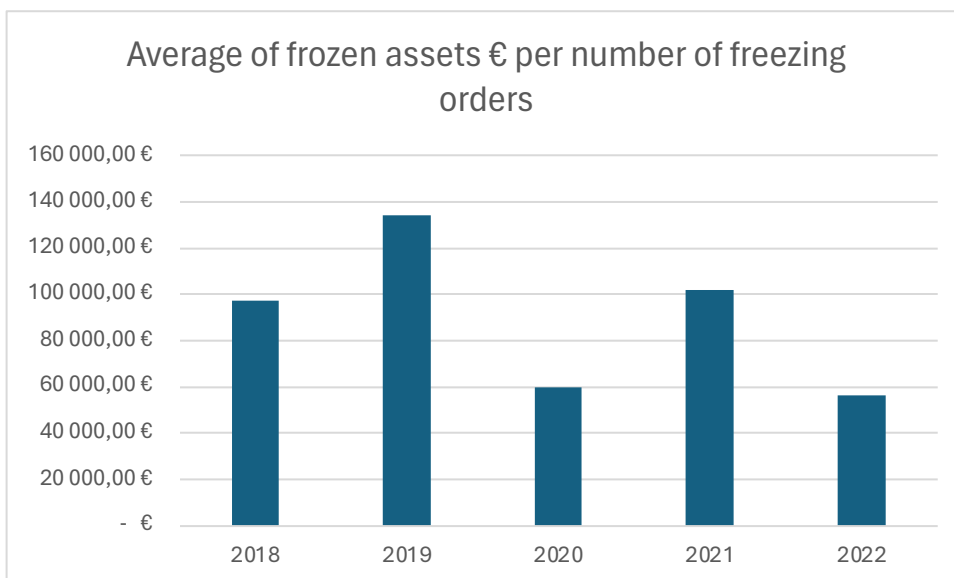


Figure 14 Frozen assets average per number of freezing orders in Finland

Due to high level of volatility of the Swedish and Norwegian Krone (SEK, NOK) against euro, the monetary values are kept in the original currency in this thesis. As seen below in Figure 15, the total amount of frozen assets in Sweden peaked in 2020, with almost 250 million Swedish Kronas frozen. The decrease in frozen assets between 2020 and 2021 was 72 %. This in itself does not tell us if there has been an increase in cases since the number of freezing order cases can be smaller even if the amount of assets seized is high. The amount of frozen assets in SEK between 2015 and 2019, as well as the number of freezing orders is based on the Swedish Financial Intelligence Units annual report from 2019 (Polismyndigheten 2020), and the data between 2020 and 2022 based on the Swedish Financial Intelligence Units annual report from 2022 (Polismyndigheten 2023). The number of asset seizure orders by the Swedish Prosecution Authority relating to money laundering 2015-2019 in Sweden was found on the Swedish Prosecution Authority's annual report (Åklagarmyndighetens årsredovisning) of 2017, 2018, and 2019.

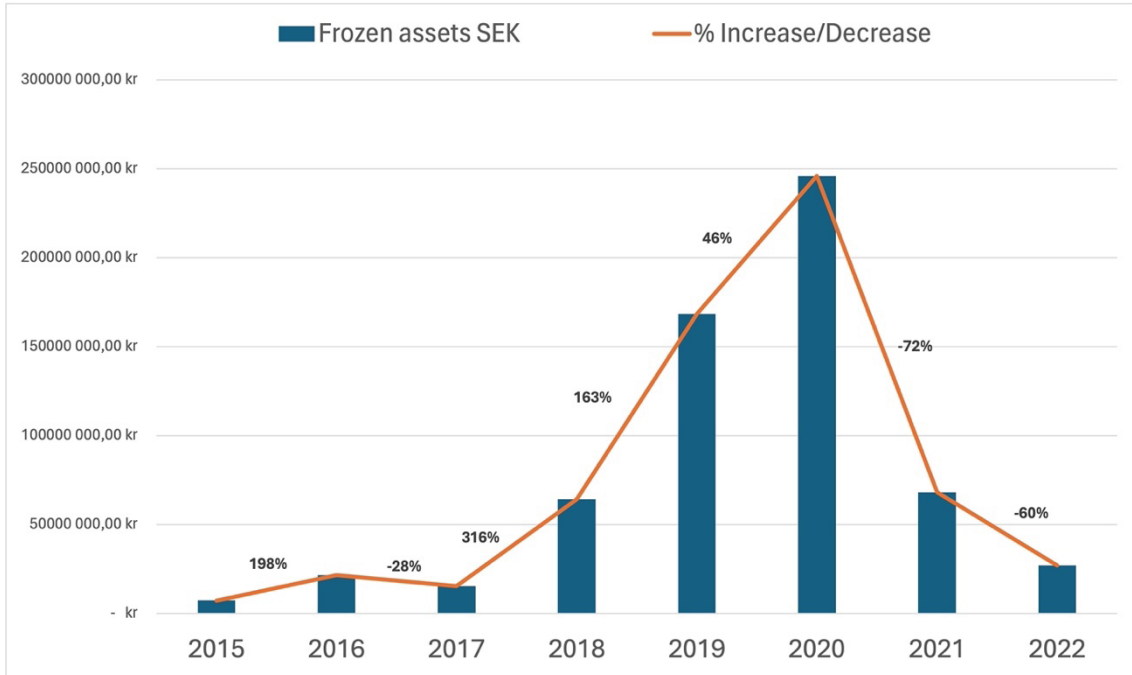


Figure 15 ML frozen assets in Sweden

In Figure 16 are the number of asset freezing orders in Sweden between 2015 and 2022 presented. A clear increase is seen between 2016 and 2021, whereas a 69 % decline is found between 2021 and 2022.

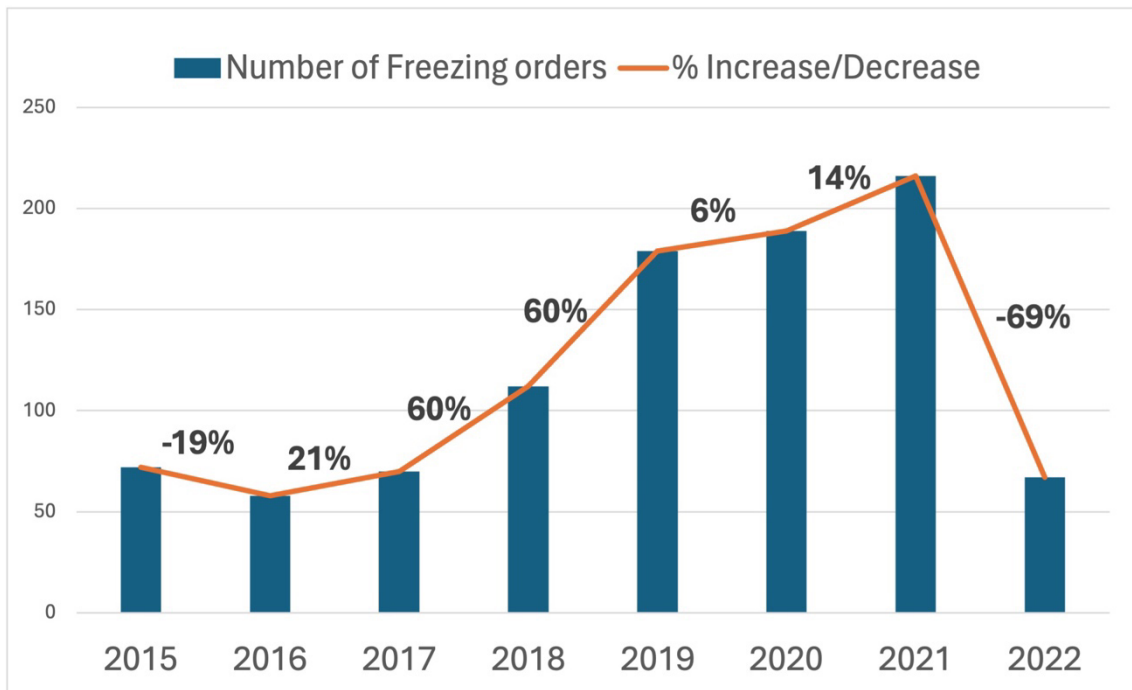


Figure 16 Number of ML freezing orders in Sweden

Figure 17 presents the amount of frozen assets and the number of freezing orders in Sweden between 2015 and 2022 presented. Though it is important to

remember that the amount of frozen assets can be high in one case and low in another, due to which the number of freezing orders can be seen to be higher in 2021 than in 2020, but the amount of frozen assets lower in 2021 than in 2020.

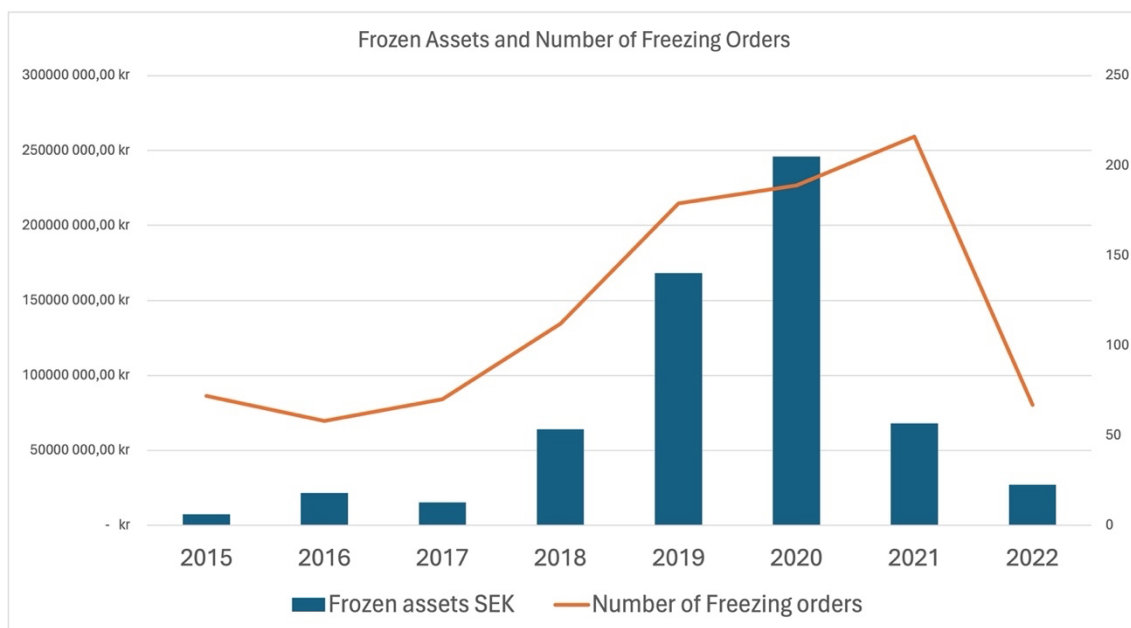


Figure 17 ML frozen assets and number of freezing orders in Sweden

In the Figure 18 below the number of asset seizure orders in Sweden is only presented for the time period between 2015-2019, due to the Swedish Prosecution Authority's annual report not itemizing the asset seizure orders, and thus the data cannot be used for 2020-2022.

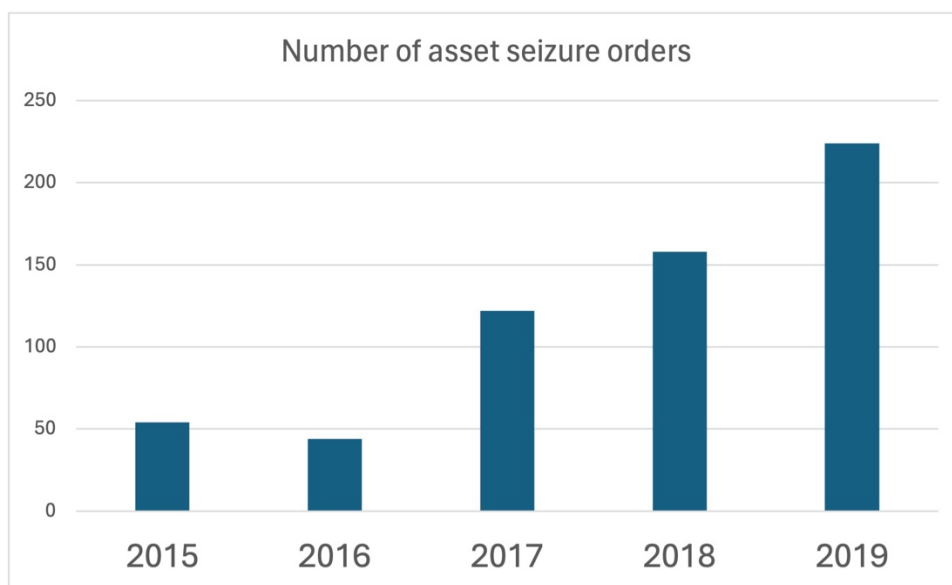


Figure 18 Number of ML asset seizure orders in Sweden

Regarding the data relating to frozen and seized assets for Norway, was data only found for seized assets between 2020 and 2022 seen below in Figure 19. The data are based on the Norwegian National Bureau of Investigation's Financial Intelligence Unit annual report (Økokrim 2022). As mentioned in the annual report, the high number in 2020 is related to a judgment in which confiscation of NOK 825 million was imposed. It should also be noted that the amount for 2022, is based as of 24th of April 2023. The amount might still change due to more judgments becoming legally enforceable. This clearly shows the importance of knowing the number of cases and not only looking at the amount of assets, and how the amount of assets might vary case by case. To note, the frozen assets were not found regarding Norway, neither were the number of freezing or seizure orders available for Denmark.

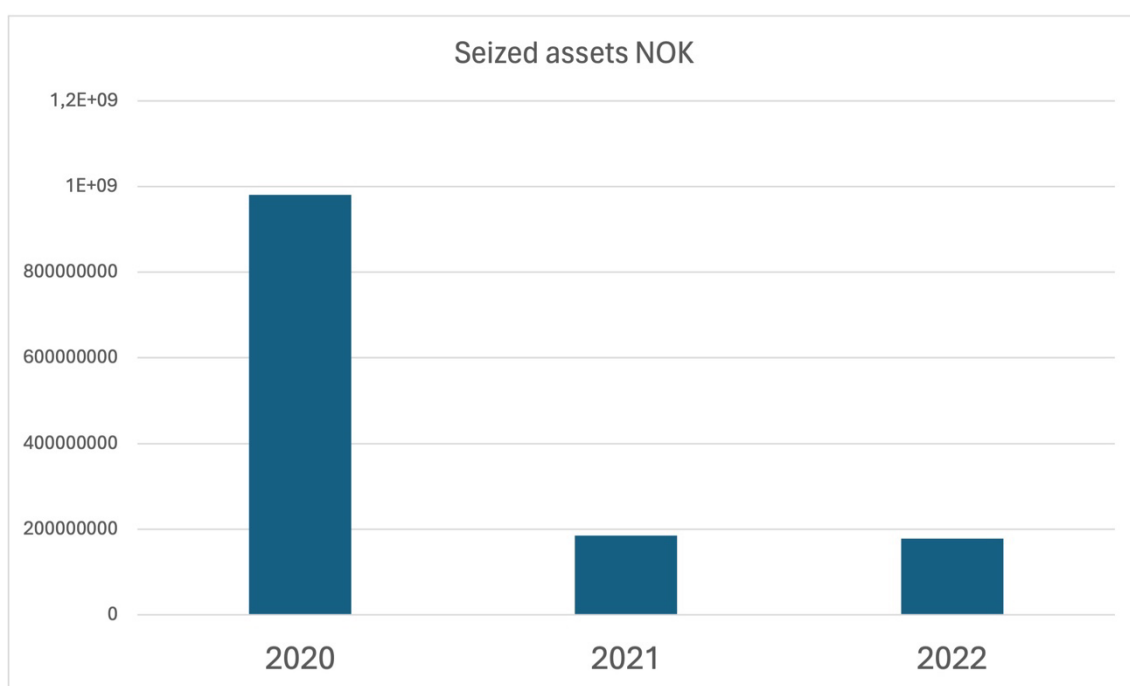


Figure 19 Amount of seized assets in NOK 2020-2022 in Norway

The relationship between SRs and sentences of Finland can be seen in Figure 20 below. Of course, the extremely high number of SRs in 2021 makes it difficult to see the actual relationship between the Finnish SRs and Sentences. Figure 21 below excludes the two largest SR values and confirms that the numbers of sentences are extremely low in relation to the number of SRs.

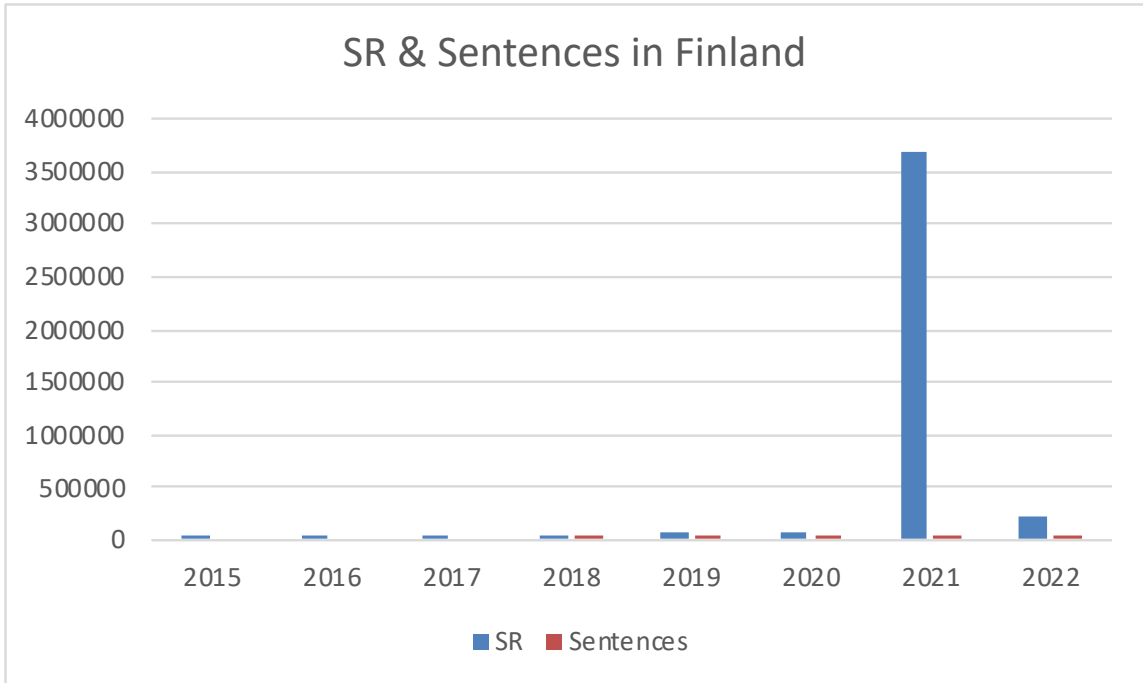


Figure 20 SR's and Sentences in Finland between 2015-2022



Figure 21 SRs 2015-2020 and Sentences 2015-2022 in Finland

When looking at Figure 22 below, we see the SRs and sentences in Sweden between 2015 and 2022. Here we see that the number of sentences is rising, and clearly during the last three years in relation to the rising number of SRs.

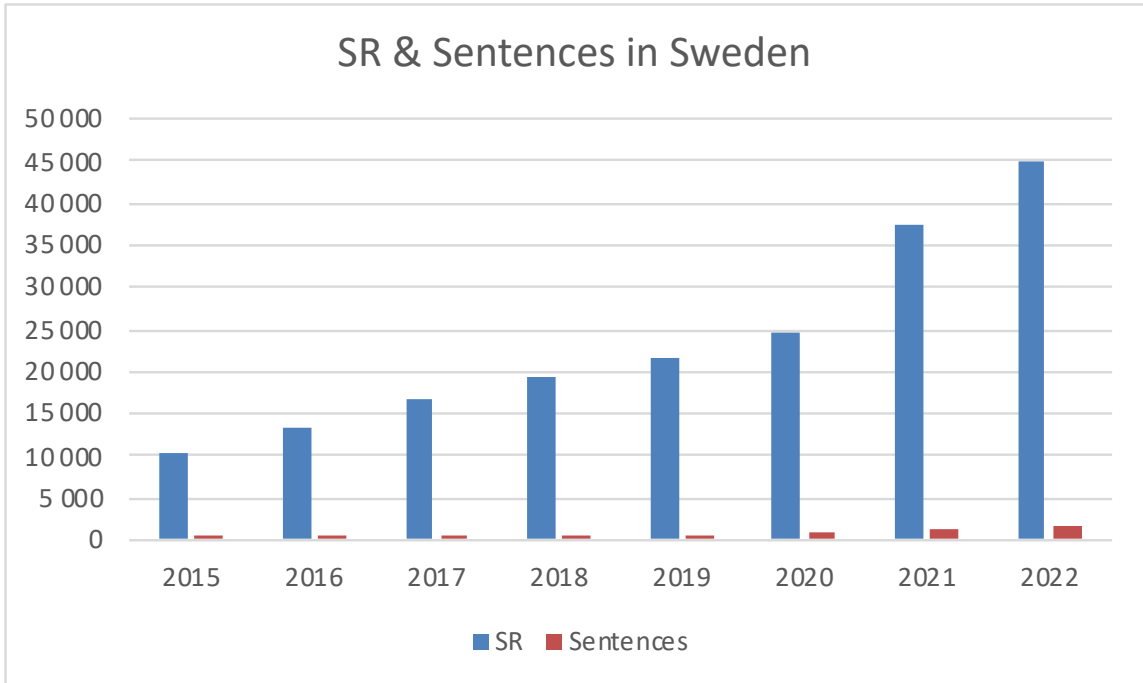


Figure 22 SRs and Sentences in Sweden between 2015-2022

When looking at Figure 23 below, we see the SRs and sentences in Norway, where no significant rise in sentences can be found, even though an even rise of SRs can be seen.

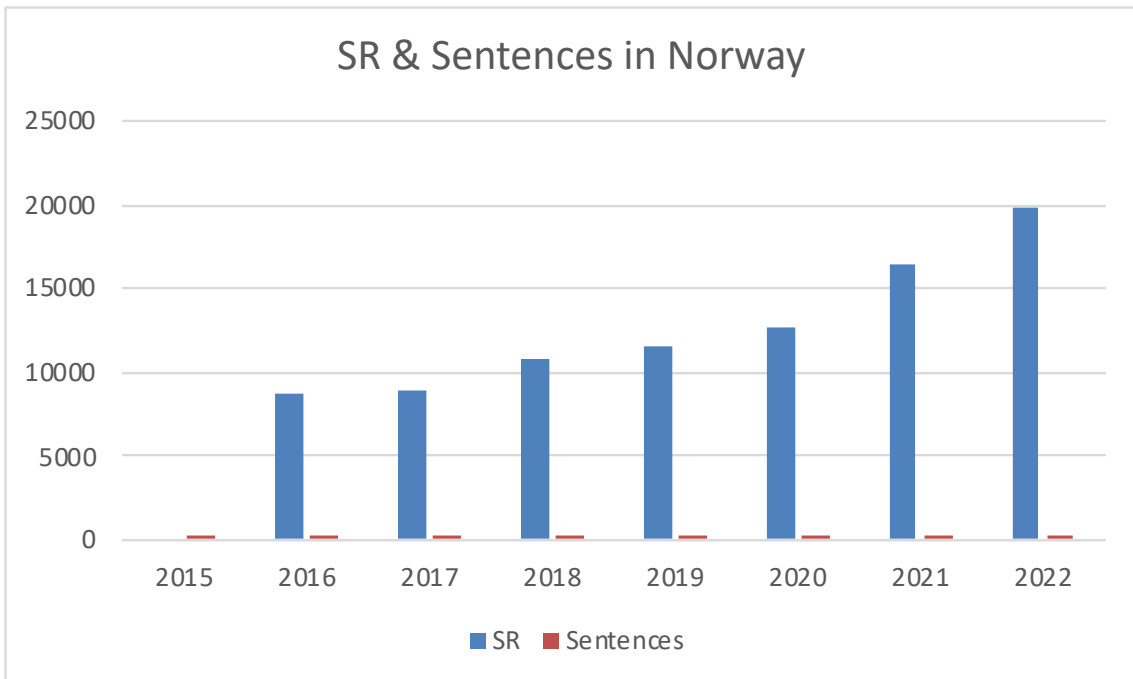


Figure 23 SRs and Sentences in Norway between 2015-2022

When looking at Figure 24 below, we see the SRs and sentences in Denmark between 2016 and 2022. Here we see that the number of sentences clearly rise in relation to the SRs during 2022.

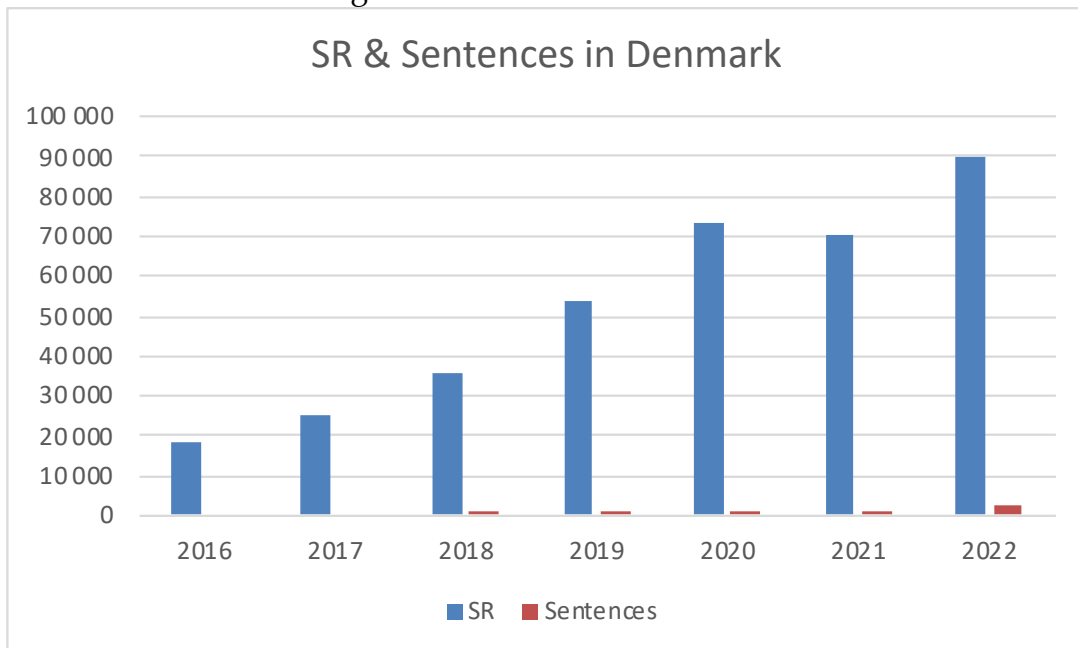


Figure 24 SRs and Sentences in Denmark between 2016-2022

SR's turnover rate to sentences is presented in Table 14 below. As seen, Finland does not reach even 1 % during the considered years, and the rate actually declines each year, which can be connected to the large increase in SRs, whereas the sentences hold quite steady with minor fluctuations between the years. Even though Sweden's SRs are on a steady incline, so are their sentences. It can be stated that the Swedish sentences are increasing with a higher rate than the Swedish SRs, since the turnover rate is steadily increasing during the years, reaching almost 4 % in 2022. Both Norway and Denmark are mostly comparable to Finland with under a 1 % turnover rate, except for Denmark in 2022. A steady increase in Denmark's SRs, but a staggering increase in sentences during 2022, has increased the turnover rate of 2022 to over 3 %.

Table 14 Turnover rate of SR's to Sentences

	Finland	Sweden	Norway	Denmark
2015		0,82 %		
2016		0,75 %	0,19 %	
2017		1,22 %	0,49 %	
2018	0,72 %	1,35 %	0,39 %	0,00 %
2019	0,46 %	2,83 %	0,27 %	0,05 %
2020	0,41 %	3,57 %	0,26 %	0,04 %
2021	0,01 %	3,41 %	0,35 %	0,70 %
2022	0,16 %	3,72 %	0,42 %	3,03 %

Table 15 Turnover rates in Finland

	2018	2019	2020	2021	2022
Imputable offence	466	473	446	584	769
Sentence	284	309	256	343	379
Conversion rate %	61 %	65 %	57 %	59 %	49 %
SR's	39 231	66 460	62041	3692641	230171
Imputable offence % SR	1,19 %	0,71 %	0,72 %	0,02 %	0,33 %

Presented in Table 15 above we can see how the turnover rate of imputable offences to sentences where the rate varies between 49 % and 65 %. The rate can be seen to decline each year, even though both the number of imputable offences and sentences has mostly been increasing, meaning that the number of sentences has been increasing slower than the number of imputable offences. We can also see the turnover rate from SRs in Finland into imputable offences stays below 1 % except for in 2018 when it's just below 1,20 %. The extremely high number of SRs in 2021 causes the turnover rate into imputable offences to decline from the previous years to a very low 0,02 %. The turnover rate table is created based on Harvey (2008), showing turnover from imputable offences in court to then actual persons sentenced in court.

4.2 S Statistical tests

Within this subchapter null hypotheses for the relevant data sets are tested in R (R Core Team 2021). Due to the limited number of years for which data for SR's, sentences, frozen and seized assets, imputable offences, were available for the Nordic countries, it is not meaningful to do a quantitative analysis of their relationships. The shortage of data as well as the outlier observations discussed above, would make statistical tests of relationships, such as correlation, difficult to interpret properly. However, as annual Finnish data of offences known to the authorities, as well as the offences solved, were available for the years 2006-2022, it was possible to use statistical tests to assess significance of trends. The testing of the existence of monotonic (increasing or decreasing) trend within the offences data sets was done using the Mann-Kendall non-parametric test available in R.

The rank correlation coefficient (tau) measuring the monotonicity of the trend in the case of the offences known equals 0.853, indicating is a strong growing trend. The corresponding 2-sided p-value was equal to 2.1458e-06, indicating a high level of statistical significance for the observed trend within the data. The offences known timeseries is plotted in Figure 25.

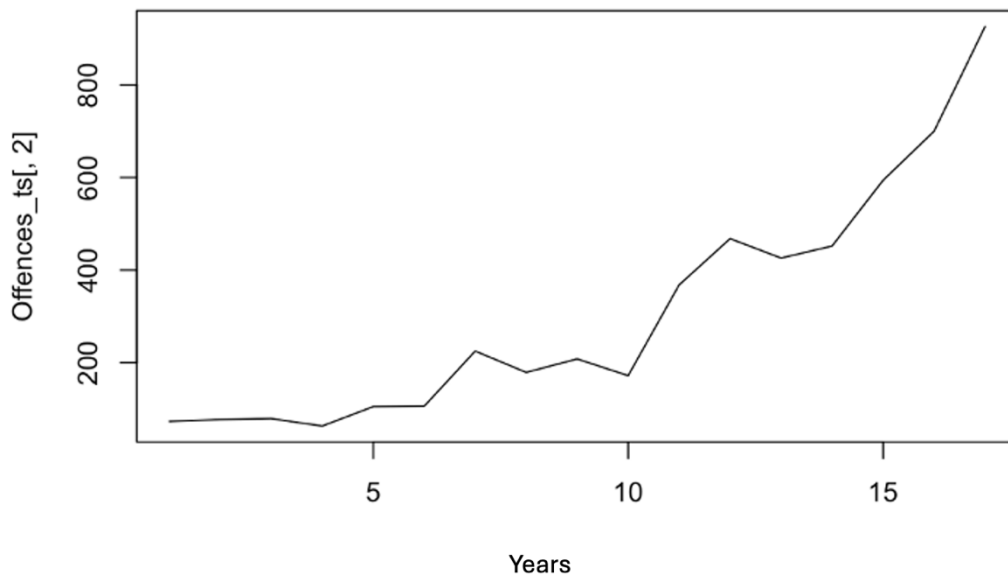


Figure 25 Timeseries of offences known

Similarly, the rank correlation coefficient for the offences solved equals 0.868, and the 2-sided p-value was equal to 1.4305e-06. There is a high level of statistical significance within the trend also for these data. The offences solved timeseries is plotted in Figure 26.

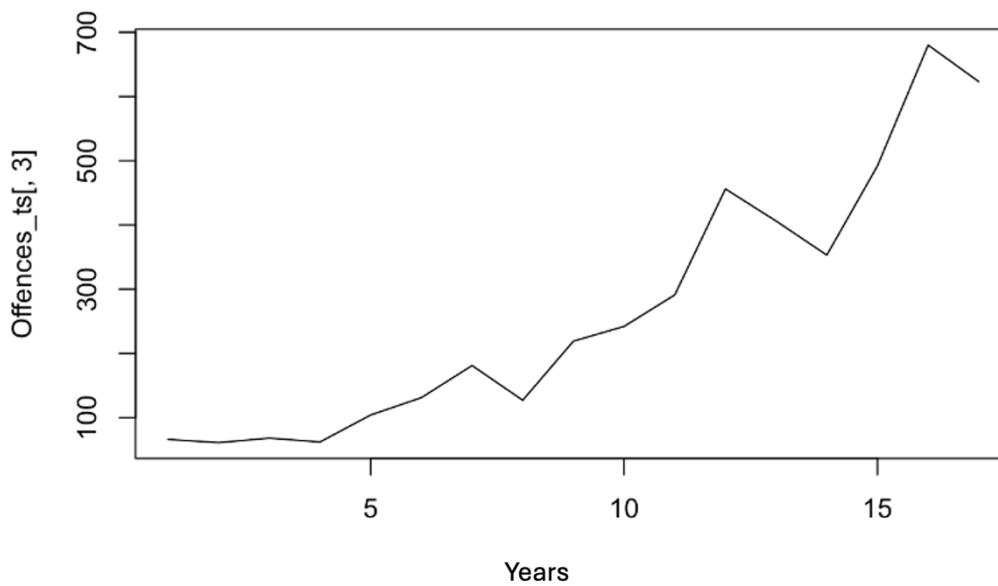


Figure 26 Timeseries offences solved

Finally, we analysed existence of a trend for the ratio of solved to known offences using the Mann-Kendall test. For this variable the rank correlation coefficient is much weaker and equals -0.147, with 2-sided p-value 0.43383. This result is not statistically significant at the 5% level and suggests that the ratio just fluctuates randomly from year to year.

4.3 Methodology

This subchapter presents the research methodology, including the method of analysis of the data used in this thesis. In this thesis AI-based language models have not been used. The empirical methodology for the evaluation of AML legislation effectiveness on reducing money laundering activity used in this thesis is based on Harvey (2008). Harvey (2008) argues that the effectiveness evaluation based on reputation, SRs, prosecution and asset recovery, represents the so-called second-best measure, due to the difficulty in establishing the impact regulation on money laundering activity. The conversion rate of the prosecutions into convictions was used in Harvey (2008), as an indicator of the quality of evidence. Due to the lack on asset recovery data and prosecution data not being available for all the countries studied in this thesis, the focus will be more on the relationship between actual SRs and sentences of the countries. The relationship between SRs, sentences, and asset recovery is clearly relevant to research the effectiveness of anti-money laundering legislation but can't be used in its entirety as a method in this thesis. Further, these concepts are linked to the criminal economics model by Masciandaro (1999) which presents the viability of criminals to launder money. By using the annual conversion rate estimates, one can attempt to quantify indirectly how "cheap" or "expensive" it is to launder money. This further relates to the regulators' influence on the money launderers profitability to launder money. For the testing of trend significance in of the relevant data the Mann-Kendall trend test was used.

For the purpose of improving the impact assessment within AML/CFT governmental proposals in Finland the cost-benefit analysis method is used. The cost-benefit analysis method measures the strengths and weaknesses of a project, in this case a governmental proposal, where the costs and benefits are weighed against each other to reach the profitability of the proposal. As specified within the guidelines of impact assessments (Valtioneuvosto 2022) should the impact assessment include important effect categories to help identify the relevant financial implications, environmental effects, and other effects on people and society. In the category of financial implications of the guidelines (Valtioneuvosto 2022) is it stated that the evaluation of financial implications of the proposals impact should include households, companies, the public economy, and the national economy. The guideline (Valtioneuvosto 2022) follows up with the key determinable items are the scale of change, size of different target groups, targeting of effects, and the ratio of costs and benefits, which is where the cost-benefit analysis comes into importance.

5 RESULTS

This chapter focuses on the results of the data analysis as well as the results of the previous research of the cost-benefit analysis for a better impact assessment. The relevant results of the data analysis can be found in the subchapter 5.1 Effectiveness of AML, whereas the cost-benefit analysis as part of the impact assessment is presented in the subchapter 5.2. Impact assessment framework showing the results of the qualitative research conducted to provide suggestions on the use of the cost-benefit analysis. Within subchapter 5.1 are the research questions 1. Are current anti-money laundering and terrorism financing regulations a cost-effective method for combating money laundering and terrorism financing? and 2. Have there been changes in the frequency of suspicious reports (SRs) over time across the Nordic countries? answered. Further, in subchapter 5.2 is the research question 3. How to use the cost-benefit analysis to improve the Finnish impact assessment? answered.

5.1 Effectiveness of AML

This master's thesis focuses on the effectiveness of anti-money laundering and terrorism financing prevention regulation. Analysing the effectiveness of the regulatory measures imposes difficulties, due to the amount of money laundered cannot be measured, limiting the possibility of knowing the true impact. The actual question can then be stated as whether the regulative measures are cost effective, and further if the measures are significant enough to minimize money laundering and their risks imposed on the society.

When analysing the data gathered of Finland, Sweden, Norway, and Denmark, we start by investigating the countries SR data. It is clear that the numbers of SR's have made a steady increase over the years for all countries. However, Finland's data set seems to be fluctuating more between the years, while still showing an overall increase over the years. Finland has the largest numbers of SRs across the years, except for in 2020. The extreme difference in the numbers of SRs of Finland and the other analysed countries, could be argued to

stem from unnecessary reports. Whether these unnecessary reports are due to regulatory requirement issues, or the reporting entities over-eagerness in reporting based on cautiousness regarding laundering scandals, can only be speculated at this point. Regarding country comparison of the money laundering sentences it can be seen how the Finnish numbers are low and stagnant in comparison to Sweden, which shows a steady growth in the number of sentences. When looking at the bigger picture of the comparison between the SRs and sentences for each country, the numbers of sentences are extremely low in comparison to the SRs. This extreme gap between SRs and sentences is shown by the turnover rate of each country. The results of the Finnish turnover rate have been declining between 2018 and 2021, and staying under 1 %, even though during years a rise in the numbers of sentences can be seen. This means that the numbers of SRs are generally increasing more than the numbers of sentences. When looking at the Swedish turnover rate the case seems to be clearly different, as the turnover rate increases clearly across the years almost up to 4 % in 2022, due to the sentences increasing at a higher rate than the SRs. The low turnover rates estimated for the Nordic countries could be related to a high number of unnecessary reports not leading to prosecutions and further to sentences, or a lack in resources of reviewing and investigating the SRs, or possibly both. The results of the statistical testing of the Finnish offences solved, and the offences known, show a growing trend with a high level of statistical significance. In contrast, the ratio of solved offences to known offences shows no significant trend and a random fluctuation from year to year.

When tying together the data analysis results with the Masciandaro (1999, 2007) model's quantities it is possible to analyse the criminal economics of money laundering in the context of Finnish regulation effectiveness. The turnover rate of SRs to sentences can be considered as an estimate of p , the probability of being detected and punished for money laundering. If the turnover rate of SRs to sentences decreases, it means that the probability of being detected is lowered for the case of one randomly chosen criminal. The results for the Finnish turnover rate can thus be used to argue that due to the extremely low and decreasing number of turnover rate of SRs to sentences, the probability of being detected and punished for money laundering decreased. The number of unnecessary SRs can similarly be argued to also have an effect on the probability of being detected, since an increase in unnecessary SRs lowers the detection probability for the true criminal. If the regulation is more prone to produce more SRs without an increase in the resources available for the investigation, the effectiveness of the regulation is weakened. Notably, under the model regulation also has the ability to affect t , the severity of the penalty from the detected laundering attempt, and if the severity of the penalty is higher than the expected utility, can money laundering then become not profitable. However, considerable amount of further data would be needed to try to estimate the effect of increasing t as a deterrent.

5.2 Impact assessment framework

This chapter presents a framework for the use of cost-benefit analysis within legislative impact assessments. Based on the different cost-benefit analyses presented within the theoretical framework, suggestions are made for the Finnish Finance Ministry's unit for preventing money laundering and terrorism financing future impact assessments. The main issue earlier research has faced when making a cost-benefit analysis on AML legislation, is the lack of reliable quantitative information to estimate its impact. The research by Unger et al. (2013) presents a detailed way of making a cost-benefit analysis, but due to the lack of data, only makes the analysis on a hypothetical country. The information presented in Unger et al. (2013) that is required for their cost-benefit analysis, could arguably be accessible to a large extent for the Finnish Finance Ministry's unit for preventing money laundering and terrorism financing when making an impact assessment within a governmental proposal. This framework presents tools to consider in a cost-benefit analysis for the purpose of a legislative impact assessment.

The approach of Unger et al. (2013) for the cost-benefit analysis focuses on analysing whether the existing efforts should be continued. To utilize this approach the components of costs and benefits are each quantified separately as in the following:

1. Costs for the on-going policy making are calculated by taking the total annual budget of the ministry section responsible for AML/CFT policy and dividing it with the number of full-time staff dedicated to anti-money laundering and combating terrorism financing matters.

2. Costs for FIU are calculated correspondingly by their budget and the number of staff.

3. The supervision cost is derived from the budget of supervisor, number of staff of supervisor, and the number of supervised.

4. Costs of the law enforcement and judiciary can be derived through the overall budget for the considered analysis year of law enforcement, i.e. public prosecutor, police and other investigating authorities, the share of the budget spent on AML/CFT, the number of staff dedicated full time to AML/CFT in the law enforcement agencies.

5. Further regarding the costs of the judiciary, is the budget for the analysis year for the judiciary, the share of the judiciary's annual overall budget spent on AML/CFT, and the number of staff dedicated to AML/CFT task within the judiciary.

6. The sanction costs (sanctions against the money launderers), which include prison costs for the launderers, and costs for enforcing the launderers to pay their fines. By calculating the annual cost to incarcerate a person in a prison and multiplying it by the unsuspended imprisonment time and multiplying that by the average number of convictions in a year.

7. The costs created by the duties of the private sector can be identified by calculating the average cost of filing a report to the FIU and the annual amount spent on total training costs for AML/CFT policy.

In addition, reduction in privacy can be considered as a cost of AML/CFT policy, but since it is a social cost, it is extremely difficult to measure or estimate. The same argument applies to the efficiency costs for society and the financial system, caused by increase in customer due diligence and delayed financial transactions.

To calculate the benefits of AML/CFT policy, a list of items are to be considered similar to the costs. 1. The fines of money launderers and terrorist financiers are calculated by taking the average amount regarding the fines for a money laundering and terrorist financing offence, the average number of criminal fines imposed per year, the minimum and maximum criminal fines for corporate criminal liability, as well as administrative law sanctions. 2. The benefits of confiscated proceeds are calculated by taking the average of confiscated proceed regarding money laundering and terrorism financing. However, the benefit of reduction in the amount of money laundering and terrorism is very difficult to estimate empirically. Finally, the benefit of the reduction in predicate crimes, reduction in the negative effect on the real economy, and the decrease in risk for the financial sector, can all be concluded to be extremely difficult to estimate in practice. Even though it is difficult to give numerical values to all costs and especially benefits, a cost-benefit analysis would still be useful when presented as a portfolio of scenarios to demonstrate the outcomes under different assumptions concerning the costs and benefits. Such a quantitative scenario analysis could then accompany a qualitative analysis on the costs and benefits within the impact assessment.

An alternative to the approach by Unger et al. (2013) is the approach used by the New Zealand's Ministry of Justice (2017) in their cost-benefit analysis when reviewing the AML legislation. Monetary value forms the basis of the benefit cost ratio (BCR) and is given to:

1. the costs of government expenditure on the initiative,
2. compliance costs for businesses and consumers,
3. to the benefits of seizure and forfeiture revenues to the government,
4. crime reduction derived from restraining and confiscation of money laundering funds.

These benefits and costs are partially similar to those used by Unger et al. (2013). In addition to the costs and benefits calculated for the BCR, there are strategic and societal benefits, such as deterrence of money laundering, decrease in social harm, and improvement of international reputation. The Ministry of Justice (2017) calculate the decrease in social harm by estimating it through the portion of money laundering supported by drug crimes and applying social harm of drugs indices. The estimated percentage of money laundering, generated by drug crimes and the reinvestment in the drug trade, and the estimated total profit of the drug trade within the country annually, i.e. total profit from drug sales, and the value of total social harm are used in the estimation method of the value of drug harm avoided. The value of drug harm avoided, is further multiplied by the value of restrains, which the Ministry of Justice (2017) derives from the proceeds of crime disruption index by McFadden (2014). This estimation shows the social harm which is thus avoided through restraining and seizing money laundering funds.

The costs modelled of the Ministry of Justice (2017) includes business compliance costs, broken up into costs associated to customer due diligence, account and transaction monitoring, record keeping, AML risk and compliance monitoring programme, and suspicious transaction reporting. In addition, the salary data should be considered, as in Unger et al. (2013). These business compliance costs can be obtained through surveying the relevant obliged entities the legislation is targeting. The government costs are divided into the supervision, FIU, the police, and the Ministry of Justice costs, and presented as implementation costs for the following five years. These costs are also considered in Unger et al. (2013). The Ministry of Justice (2017) presents an impact summary table, with a visualised overview of the costs and benefits, the certainty level, and the net present value of the total quantified societal impact calculated.

Some sections of the cost-benefit analysis require questioning other parties involved in the AML/CFT work and governmental proposal to acquire the relevant data for the analysis as well as the impact assessment. Even though the cost-benefit analysis provides issues in application of anti-money laundering and countering of terrorism financing context in governmental proposals, it should still be considered as an important addition for the purpose of creating a comprehensive overview of the impact of the legislation. The cost-benefit analysis is suggested as a usable method in impact assessments, by the Finnish impact assessment guide (Valtioneuvosto 2022), and the European Commission's guidelines and tools for better regulation.

6 CONCLUSIONS

The focus of this master's thesis was on the effectiveness of the of Finnish anti-money laundering regulation and the Finnish anti-money laundering regulation's impact assessment. For comparative purposes, data related to money laundering activities was obtained not only for Finland, but three other Nordic countries. Measuring of AML regulation effectiveness raises issues and is generally difficult due to the unknown total amount of laundered money in any given year when the regulation has been imposed. When questioning the effectiveness, it is relevant to also ask whether the existing measures in use actually are a cost-effective method for combating money laundering. The cost-effectiveness of the existing measures is crucial to know, in order to be able to make any changes to improve combating money laundering and terrorism financing.

Despite the difficulty of quantifying the real effects any existing or future measures have on money laundering, certain conclusions can still be made utilizing the models derived by Masciandaro (1999, 2007) that formalize the profitability of criminals laundering money. The rationale in such analysis is that if the regulative measures were able to create an environment where it is not expected to be profitable to launder money, it should accordingly be deterred at least to an extent, assuming the criminals choose their actions as rational agents. The relevant key parameters of the models of Masciandaro (1999, 2007) are the probability of getting caught and the severity of the implied penalty, which can be affected through legislative measures and resources allocated to investigative bodies. The Ministry of Justice (2017) report states that deterrence of money laundering directly results from monitoring, but the Masciandaro (1999, 2007) models show that the deterrence can rather be viewed as a varying function of various model parameters. In order to understand the deterring effects both monitoring and legislation-based penalties and sanctions have, there is an opportunity for further research based on the theoretical framework of Masciandaro (1999, 2007). Importantly, monitoring of suspicious activities alone cannot act as a deterrent, unless there are sufficient resources to investigate the reported cases, since only through this activity can the probability of getting caught be increased.

Harvey (2008) concludes that the reasoning of absorbing the AML compliance costs by institutions linked to their reputation importance, which can be linked to the reduction in reputational loss, seen as a benefit category in the cost-benefit analysis of Deloitte (2016) and Harvey (2004). This reputational importance can be seen as relevant also in the context of the government, when looking at the benefit factors in AML regulations of the Ministry of Justice (2022, 2017) and Harvey (2004). When analysing the imminent importance of reputation in the AML context, it could be argued that cause behind the increases in SRs can be linked to the fear of loss of reputation. When assessing the turnover rate of SRs to sentences, we are able to at least partially quantify to which extent the existing regulative measures are effective. It can be argued that a low turnover rate means that legislation creates many unnecessary SRs, which in turn lowers the probability of a single criminal getting caught given a fixed ability of the investigative bodies to review the reports. A fear of reputational loss by the reporting entities could also be argued to represent a reason for many unnecessary SRs. In any case the investigative bodies should have access to enough resources to satisfy the demand from the regulative bodies. Addressing the issues with false SRs and investigative bottlenecks could be able to lower the AML compliance costs, as well as governmental costs, when implemented properly.

Scholars such as Saperstein et al. (2015) and Ferwerda (2018) have commented on the lack of cost-benefit analysis in AML policy work. However, as discussed in this thesis, the implementation of a full cost-benefit analysis is complicated by the difficulty of quantifying all relevant costs and benefits of an AML legislation. Based on the comments by the Prime Minister's Office (Valtioneuvoston kanslia 2021) and the impact assessment guidelines for law drafting (Valtioneuvosto 2022) it can be argued that a cost-benefit analysis would be well placed for a better the impact assessment. Unger et al. (2013) and the Ministry of Justice (2022, 2017) present estimation methods of a cost-benefit analysis for AML/CFT legislation, which could be useful for Future Finnish AML/CFT governmental proposals. As the Finnish the impact assessment guidelines for law drafting (Valtioneuvosto 2022) suggest, a cost-benefit analysis should be routinely included within an impact assessment. Hahn (2004) states, that the quantitative cost-benefit analysis and cost-effectiveness analysis would support improving regulation by suggesting eliminating or changing inefficient regulation. Pol (2020) comments how a better result of policy effectiveness would be achieved through active engagement with different perspectives and criticism. Both Hahn (2004) and Pol (2020) comments can be agreed upon since the AML regulation should not be allowed to continue on without the knowledge of whether the used measures make an actual and cost-effective impact. This thesis suggests that the current Finnish AML measures are not particularly cost-effective in their prevention of money laundering, based on the estimated turnover rate of SRs to sentences which is extremely low. This suggests that there are either, ineffective costs of different parties such as compliance costs and FIU costs, and likely not enough resources allocated to the FIU and the investigative bodies. Importantly, the comparative analysis of data from the other Nordic countries revealed that Sweden has been able to steadily improve their turnover

rate of SRs to sentences. This provides motivation for further research to systematically compare the legislative basis of the regulation and the use of investigative resources between the countries to identify areas where Finland might be able to improve its situation.

Some limitations of the thesis can be seen in the lack of available longer-term data across the chosen countries, regarding sentences, prosecutions, frozen and seized assets, making the data set narrow and hindering a comprehensive analysis in certain sections of the research. The current FATF Methodology (FATF 2013-2023a) which was originally published in 2013, but includes some amendments over the years, with the latest update expected in June 2023, could upon future review provide new tools for improving anti-money laundering measures. Some sections of the thesis are based on research conducted in different Nordic languages, and the interpretation has been done based on the writer's understanding of these languages, and when needed verified by translation platforms.

Future research on the topic is important to increase the knowledge base on preventative measures for money laundering and terrorist financing. Research on the effectiveness of anti-money laundering legislation in comparison to the results of FATF ratings, could bridge the possible gap between FATF's measurement of a country's effectiveness and the results derived through legislative effectiveness research. Another interesting topic, only briefly mentioned within the thesis, is whether there is a factual dependence between money laundering scandals in the Nordic banking sector and the rise in the number of SRs by the reporting entity group. Finally, it would be attractive to make a more comprehensive analysis of regulation effectiveness when considerably more yearly data are available from a large number of countries.

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APPENDIX 1: DATA SETS

Table 16 SRs numbers per country and year

SRs	2015	2016	2017	2018	2019	2020	2021	2022
Finland	37 703	31 194	48 318	39 231	66 460	62 041	3 692 641	230 171
Sweden	10 170	13 322	16 551	19 306	21 709	24 505	37 528	45 113
Norway		8 780	8 901	10 748	11 539	12 701	16 513	19 783
Denmark		18 671	24 911	35 769	53 481	73 447	70 449	89 783

Table 17 Money Laundering Sentences in Finland 2018–2022

Sentences	2018	2019	2020	2021	2022
Money laundering	156	180	145	206	240
Attempted money laundering	0	0	2	3	1
Aggravated money laundering	66	54	55	60	62
Attempted aggravated money laundering	1	1	0	0	0
Negligent money laundering	50	56	44	60	54
Money laundering violation	11	18	10	14	22
Total	284	309	256	343	379

Table 18 Money laundering imputable offenses in Finland 2018–2022

Crime nomenclature	2018	2019	2020	2021	2022
Money laundering	286	290	256	382	556
Attempted money laundering	1	2	5	5	2
Aggravated money laundering	75	63	70	67	77
Attempted aggravated money laundering	2	1	0	0	2
Conspiracy for the commission of aggravated money laundering	-	-	-	-	-
Negligent money laundering	71	71	68	89	73
Money laundering violation	31	46	47	41	59
Total	466	473	446	584	769

Table 19 ML offences known and solved in Finland 2006-2022

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Offences known to the authorities	73	77	79	63	105	106	225	179	208
Offences solved	66	61	68	62	104	131	181	127	219
	2015	2016	2017	2018	2019	2020	2021	2022	
Offences known to the authorities	172	368	468	426	452	594	700	926	
Offences solved	242	291	456	406	353	492	680	623	

Table 20 Money laundering sentences in Sweden 2018-2022

Sentences	2015	2016	2017	2018	2019	2020	2021	2022
§ 3 Money laundering offence	19	31	86	116	347	444	793	1 149
§ 4 Money laundering offence	23	35	46	42	63	117	119	117
Section 5 Money laundering crime, serious crime	32	20	41	53	73	144	152	167
§ 6 Money laundering misdemeanour	7	13	20	42	102	137	143	169
§ 7 Money laundering	2	1	9	8	29	34	73	77
Total	83	100	202	261	614	876	1 280	1 679

Table 21 Money laundering sentences in Norway

Sentences	2015	2016	2017	2018	2019	2020	2021	2022
Money laundering	14	6	24	11	14	9	17	32
Aggravated money laundering	20	11	20	31	17	24	41	51
Total	34	17	44	42	31	33	58	83

Table 22 Money laundering sentences in Denmark 2019-2022

Sentences	2018	2019	2020	2021	2022
Money laundering	1	1	11	364	895
Aggravated money laundering	0	26	20	129	1 821
Total	1	27	31	493	2 716

Table 23 ML frozen and seized assets in Finland

	2018	2019	2020	2021	2022
Frozen assets €	5 265 055	9 793 455	7 497 526	11 612 677	5 317 885
Seized assets €	2 310 995	4 945 685	4 606 373	3 049 004	1 665 239
Seized assets %	43,89	50,50	61,44	26,26	31,31
Number of Freezing orders	54	73	126	114	94
Average of frozen € assets per number of freezing orders	97 501,02 €	134 156,92 €	59 504,17 €	101 865,59 €	56 573,24 €

Table 24 ML frozen assets and frozen and seizure orders in Sweden

	2015	2016	2017	2018	2019	2020	2021	2022
Frozen assets SEK	7 210 685	21 461 634	15 393 404	64 087 514	168 362 550	246 000 000	68 000 000	27 000 000
Number of Freezing orders	72	58	70	112	179	189	216	67
Number of asset seizure orders	54	44	122	158	224			

Table 25 ML frozen and seized assets in Norway

	2020	2021	2022
Seized assets NOK	981 000 000	185 000 000	178 000 000