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A Classification of Money Laundering Incidents

A thesis submitted in fulfilment of the requirements for the degree of

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in

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Declaration

I, Florian Jürgen Hetzel, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

Money laundering is typically described as a three-stage process, including the placement, layering, and integration of criminal assets. However, the precision of the so-called three-stage model is doubtful, with significant shortcomings in the theoretical foundation, empirical support, and research practice. Previous research has failed to trigger a scientific debate about the numerous manifestations of money laundering going beyond the three-stage model. This thesis introduces a new conceptual framework in which money laundering incidents comprise properties from crime events and their immediate environment. The conceptual framework was developed in an iterative process between data and crime science theory. Original data was gathered using a quantitative approach to content analysis applied to 180 full judgment transcripts from the Court of Appeal and Administrative Court of England and Wales (1997-2017). In a series of studies, the money laundering properties outlined in court transcripts were identified, conceptualised, and refined from the crime science perspective. In the last step, money laundering incidents were classified based on the hierarchical clustering of information from court records. The classification of money laundering incidents shows little resemblance with the standard three-stage model and offers a new viewpoint on how money laundering works. The novel approach enables researchers and practitioners to consider a broader range of properties, improving the examination and prevention of money laundering.

Impact Statement

Money laundering research operates at the intersection of science and practice. Academic publications have typically covered a wide range of topics, aiming to assist policymakers in developing more effective anti-money laundering measures. However, the focus on regulatory issues has come at the expense of efforts to understand the money laundering phenomenon itself better. Research and practice still rely on decades-old assumptions about money laundering, where the crime is believed to comprise the sequence of placement, layering, and integration. Today, the so-called three-stage model informs academic publications, official reports, regulatory guidelines, and anti-money laundering laws.

In stark contrast, this thesis is an exploratory study challenging the current view on money laundering. The potential implications of this thesis inside and outside academia are threefold: First, the thesis offers a more nuanced conceptualisation based on evidence gathered from court records of England and Wales, covering money laundering stages and methods that are not considered in the three-stage model. These underexplored money laundering stages and methods require further scientific investigation with the potential for new crime prevention techniques. Second, the thesis introduces the proximal circumstances of money laundering, including characteristics from the predicate offences and situational elements. The study of the criminogenic factors, their interplay, and their impact on the choice of money laundering stages and methods justify additional research and may complement current risk assessment methodologies on national and international levels. Third, the thesis introduces a classification of money laundering incidents with a unique combination of properties from the proximal circumstances and crime events. Hierarchical clustering was used to identify four classes of money laundering incidents, offering an alternative view to the decades-old view of the money laundering process that underlies much of today's research and prevention efforts.

Preliminary findings of this thesis have been disseminated with peers from research and practice in the course of this PhD in various ways. Parts of the project were presented at international conferences in the United Kingdom and the United States and discussed with world-leading researchers. Moreover, meetings were held with officials from the United Kingdom Home Office, National Crime Agency, Metropolitan Police Services, the Mexican Financial Intelligence Unit, and compliance industry practitioners. These meetings aimed to identify the research project's practical implications for the investigation, detection, and effectiveness of anti-money laundering policies and inform anti-money laundering professionals about the limited utility of understanding money laundering as a three-stage process.

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Chapter 1:

Thesis Introduction

In recent years, policymakers have started to recognise the issue of money laundering as an evolving threat. The illegal financial dealings uncovered by the Panama Papers and the wave of terrorist attacks in 2016 exposed severe shortcomings in the European Union's anti-money laundering and terrorist financing framework (European Commission, 2018). To identify the vulnerabilities of the internal market and associated cross-border activities, the European Commission (2017) conducted its first supranational risk assessment in 2017. The report identified 40 products and services across 11 business sectors potentially susceptible to money laundering and terrorist financing, including vulnerabilities related to new technologies not covered by the European Union's framework, such as virtual currencies and crowdfunding (European Commission, 2017, p. 3). Since 2017, the European Union has revised its legal framework multiple times in response to the latest trends in money laundering and terrorist financing (European Commission, 2021). In the future, illegal financial flows will continue to evolve alongside technological innovations, requiring regulators worldwide to update their anti-money laundering policies accordingly.

Traditionally, money laundering research is conducted with the regulators in mind. Key research areas focus on different dimensions of combating money laundering, thereby contributing to the design and implementation of control measures. To illustrate, van Duyne et al. (2018, p. 37) grouped 364 publications based on their key research topics and found that most (N=129) papers fell into the category of regulations. Surprisingly, despite the anti-money laundering focus, the crime of money laundering itself has received little attention. For instance, Levi (2014, p. 423) highlighted that despite the large volume of publications on

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regulatory responses to money laundering, empirical research on the phenomenon is scarce, and there is no basis for generalising crime patterns over time and space. Regardless of its strong policy focus, money laundering research has yet to establish a basic understanding of the crime it intends to prevent.

A significant knowledge gap concerns how money laundering works. Since the 1980s, money laundering has been understood as a three-stage process comprising the sequence of placement, layering, and integration (Barone et al., 2022; P. M. Gilmour, 2022; Levi & Soudijn, 2020; Matanky-becker & Cockbain, 2021; Raiter, 2021; Valvi, 2022). The Financial Action Task Force (2022c), in its position as the inter-governmental body setting anti-money laundering standards, keeps referring to this simplistic template in its guidelines. Case in point is the risk-based approach guidance for the securities sector, where providers are advised to identify potential vulnerabilities of products and services for placement, layering, and integration (Financial Action Task Force, 2018a, p. 23). By relying on an understanding from the last century, research and practice are currently at risk of promoting countermeasures that are no longer consistent with modern money laundering practices. The primary objective of this thesis is to understand how money laundering works and, ultimately, spark a long-overdue scientific debate about conceptualising this complex crime.

1.1 Knowledge Gaps

Over the years, the idea of money laundering as a three-stage process has been criticised for its weak scientific underpinning (e.g. Cassella, 2018; Levi & Soudijn, 2020; Matanky-becker & Cockbain, 2021; Platt, 2015; F. Schneider et al., 2006; Soudijn, 2016; van Duyne, 2013; van Koningsveld, 2013). By and large, the academic literature has pointed out shortcomings in the

theoretical foundation, empirical support, and research practice associated with conceptualising money laundering as a three-stage process. First, the *theoretical foundation* of the so-called three-stage model is missing. In particular, there is no theoretical framework to justify the specific sequence of placement, layering, and integration that constitutes the money laundering process. Gelemerova (2011, p. 76) has argued that law enforcement created the model to represent their everyday experience. And the literature has suggested the Financial Action Task Force as well as various US agencies such as the Drug Enforcement Agency and Customs Services as potential authors (Gelemerova, 2011; Levi, 2002; Levi & Soudijn, 2020; F. Schneider et al., 2006; van Duyne & Levi, 2005; van Koningsveld, 2013). Due to the unclear authorship, the theoretical foundation of the three-stage model remains unclear and cannot be assessed to this day.

Second, the *empirical support* of the three-stage model is weak. Empirical research on money laundering has been, in general, scarce (Levi, 2014, p. 423), and studies including the three-stage model are no exception. In these investigations, the three-stage model has primarily been used axiomatically to organise the countless money laundering methods mentioned in the academic literature. Simply put, empirical work of this kind has accepted the central claims of the three-stage model without question. To illustrate, Irwin et al. (2012) applied the three-stage model to data to identify trends in the use of money laundering techniques during placement, layering, and integration. In contrast, only a small subset of empirical studies has examined whether money laundering can be viewed as a three-step process. In his seminal work, van Duyne (2003) tested the three-stage model using data from the Netherlands and concluded that the model did not provide much insight into money laundering. With hardly any work to test the central claims, the empirical foundation of the three-stage model is doubtful.

Third, the three-stage model is associated with questionable *research practices*. Irrespective of ongoing criticism, the three-stage model has remained the state-of-the-art understanding of how money laundering works since the 1980s. There is an indication that the model's popularity is mainly due to practical considerations. Van Koningsveld (2013, p. 438) noted that if inaccuracies are pointed out, criticism is simply noted before moving on to the analysis. This view is supported by references within the academic literature stressing the practical utility of the template (Levi & Reuter, 2006; Reuter & Truman, 2004; Suendorf, 2001). One cannot help but get the impression that the practical appeal of conceptualising money laundering as a three-stage process has stifled any debate about its accuracy. The long overdue discussion about the three-stage model is the starting point for the present thesis, with its key objective to understand how money laundering works.

1.2 Scientific Perspective

The field of money laundering brings together various scientific disciplines. Unger (2013, p. 3) describes money laundering research as a multidisciplinary debate covering anthropological, criminological, economic, regulatory and social aspects. However, the multidisciplinary character of money laundering research comes at a cost. Despite contributions from many scientific disciplines, there has yet to be a unified theoretical and methodological approach to studying money laundering. Van Duyne et al. (2018, p. 35) have attributed this to the tendency of money laundering researchers to write for peers from their given academic discipline. Due to the multidisciplinary nature of money laundering research, it is imperative to clarify the underlying assumptions central to this doctoral thesis.

In this thesis, money laundering is examined from the crime science perspective. Crime science is the application of scientific methods from different academic disciplines for crime reduction and offers a complementary view to standard criminological approaches. Criminologists attribute a person's inclination to commit crimes to biological, social, and developmental factors. In comparison, crime scientists see the interaction between potential offenders and their environment at a given time and place as the cause of crime (Clarke, 2004; Cockbain & Laycock, 2010; Wilcox & Cullen, 2018; Wortley et al., 2019; Wortley & Mazerolle, 2008). From the crime science perspective, it is not only the offenders' inclination to commit crimes but also the criminogenic circumstances that are vital to understanding how money laundering works.

Crime science is advantageous for studying money laundering in at least two ways. First, the crime science perspective comes with a much-needed overarching framework currently lacking in money laundering research. Compared to the weak scientific underpinning of the three-stage model with its shortcomings in the theoretical foundation, empirical support, and research practice, crime science comes with a rich body of literature to guide the study of criminal behaviour (e.g. P. J. Brantingham & Brantingham, 1991; Clarke, 1980; L. E. Cohen & Felson, 1979; Ekblom, 1994; Ekblom & Tilley, 2000; Felson & Clarke, 1998; Mayhew et al., 1976). Second, crime science offers a toolkit of crime-reducing approaches that seamlessly connects with the strong policy focus of money laundering research. For example, the 25 situational crime prevention techniques provide a valuable template for designing crime-reducing strategies (Clarke, 2017, p. 293). Crime science, with its theories and crime reduction principles, is considered beneficial for studying how money laundering works.

Based on crime science theory, this thesis considers more features of the money laundering phenomenon than the standard conception. From this perspective, two elements are the focal point of this study on how money laundering works, as illustrated in figure 1. First, the focus lies on the *crime event,* including the stages and methods of money laundering. The conceptual point of departure is the three-stage model, where the crime event is divided into placement, layering, and integration. Second, this thesis stresses the importance of the *proximal circumstances,* which is the immediate environment in which money laundering occurs. Here, the paradigm of proximal circumstances is utilised as the conceptual starting point, comprising criminogenic environmental factors and the potential offender's dispositions (Ekblom, 1994, pp. 195–211). Together, the crime event and proximal circumstances constitute this thesis' overarching framework for money laundering incidents.

Figure 1

Overarching Framework
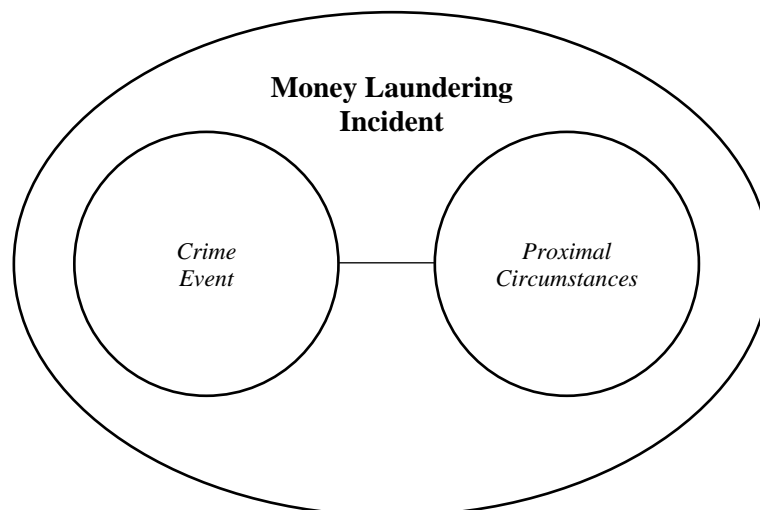
1.3 Primary Objective

By adopting the crime science view, this thesis represents a new line of research that takes a more comprehensive position on the issue of money laundering. Generally, the standard perspective of understanding money laundering as a sequence of placement, layering, and integration is limited to criminal conduct. By implication, criminogenic environmental factors essential for the crime science view aiding the money laundering activities of offenders are not systematically considered. However, the immediate environment has gained prominence in the scientific literature on money laundering. For instance, recent publications by Levi and Soudijn (2020) and Gilmour (2022) have advocated expanding the focus from crime to environmental properties to better understand money laundering. With the change of perspective, many open questions about the fundamental nature of the money laundering phenomenon need to be answered.

This thesis' primary objective is to understand how money laundering works, considering crime events and their immediate environment. The research aim includes breaking down the essential properties of the offence, the criminogenic environment, and how they come together. Accordingly, the thesis aims to accomplish the following:

- First, determine the crime event's central money laundering stages and methods.
- Second, identify the criminogenic features of the proximal circumstances of money laundering.
- Third, assess the prevalence of properties from the crime event and proximal circumstances during money laundering incidents.
- Fourth, find classes of money laundering incidents based on the characteristics of crime events and their immediate environment in data.

By considering features of the crime event and the immediate environment together, the thesis offers a new perspective on the money laundering phenomenon.

1.4 Research Approach

Using crime science to study how money laundering works requires an appropriate research approach. First, crime science is *problem specific*. From the crime science perspective, criminal activity is a problem that needs solving. The problem-led view, therefore, requires specificity about the parts of the money laundering phenomenon relevant to this enquiry. Second, crime science involves *empirical research*. Crime science is considered evidence-based, in contrast to work based on ideology, moral judgements, or theory (Clarke, 2004; Cockbain & Laycock, 2010; Tilley & Laycock, 2016; Wortley et al., 2019). In order to study money laundering from the crime science perspective, this thesis requires a research approach that allows for a problem-specific and empirical investigation of the phenomenon.

Scientific exploration enables problem-specific and empirical research on money laundering. New ways to investigate a given phenomenon must be identified where no or only partial scientific knowledge is available. Stebbins (2001, p. 7) argued that, without a well-established theory, researchers could start exploring groups, processes, activities, or situations to discover new insights. To that end, exploratory research primarily relies on inductive reasoning, which can be understood as inferring trends or patterns from data (De Vaus, 2001; Heit, 2007; Reiter, 2013, 2017; Stebbins, 2001). For this thesis, inferring trends from data has been thought ideal for studying money laundering from a crime science perspective for two reasons: First, scientific exploration is an *iterative process*. Reiter (2017, p. 144) summarised scientific exploration as a process of constant adjustment, where initial assumptions in a

constant back-and-forth between theory and evidence are refined. In this way, this research approach allows specifying the issue of money laundering despite shortcomings in its theoretical foundation, empirical support, and research practice. Second, scientific exploration involves *empirical research*. Inductive reasoning by way of implication primarily relies on data. De Vaus (2001, pp. 5–6) has described this approach as theory-building, where observations at the empirical level are used to form an argument at the conceptual level. For the above reasons, scientific exploration is an excellent research approach to examine money laundering and its immediate environment.

Scientific exploration is not without its challenges. Even though exploratory research lends itself to studying money laundering, the approach has some disadvantages. On the one hand, scientific exploration comes with the inbuilt risk of failure because there is no guarantee that the investigation will lead to new and innovative insight (Swedberg, 2020, p. 17). On the other hand, there is a lack of guidance for conducting scientific exploration, and it is up to the researcher to set an agenda that guides the investigation (Stebbins, 2001, p. 18). This lack of guidance was further exaggerated by the three-stage model's shortcomings in theory, empiricism, and research practice. Together, the inbuilt risk of failure and lack of guidance must be mitigated, shaping the research process of this exploratory study.

1.5 Thesis Outline

This doctoral thesis comprises three parts, whose chapters contribute to the primary objective. *Part 1* constitutes this thesis' foundation, containing the literature review and method selection. *Chapter 2* covers the first scoping review of empirical research, where money laundering is considered a three-stage process. *Scoping reviews* is a knowledge synthesis

method to determine critical concepts, evidence, and research practices of emerging or heterogeneous research areas. *Chapter 3* introduces the *method* of this thesis. Informed by the scoping review in chapter 2, this part outlines and justifies the data collection and data analysis methods used to explore the properties of money laundering and its immediate environment.

Part 2 covers the empirical examination of the *properties* of money laundering. *Chapter 4* entails the empirical study of the money-laundering *crime events,* with stages and their methods as central building blocks. The main goal is the identification of key stages and methods during money-laundering crime events. *Chapter 5* covers the empirical examination of the *immediate environment*. The purpose of this chapter is to identify the properties that make the proximal circumstances of money laundering.

Part 3 marks the transition from individual properties to money laundering *incidents*. *Chapter 6* summarises the properties of money laundering incidents. Here, the chapter assesses the prevalence of characteristics from proximal circumstances and crime events during money laundering incidents. *Chapter 7* introduces *a classification of money laundering incidents*. The main objective is to simplify money laundering incidents and pair them meaningfully, making them more accessible. *Chapter 8* discusses the main findings, implications, and recommendations for future research.

1.6 Original Contribution

The original contributions of this thesis are conceptual, methodological, and empirical. First, the *conceptual contributions* of this doctoral thesis entail the creation of an entirely new conceptual framework considering properties from crime events and the immediate environment. Incorporating properties of both crime events and the immediate environment of

money laundering goes beyond the conceptual boundaries of the three-stage model, where the situational factors have not been accounted for systematically. Second, the *methodological contributions* of this thesis entail employing quantitative methods of data collection and data analysis that are new to the field of money laundering. Using quantitative content analysis and hierarchical clustering adds another set of tools to studying money laundering. Third, the *empirical contribution* of this dissertation lies in studying money laundering incidents in the context of England and Wales. With most empirical studies on the three-stage model focusing on the Netherlands, the present doctoral thesis adds a new perspective to scientific discussion. Together, this thesis' conceptual, methodological, and empirical contributions challenge the current understanding of how money laundering works.

Part I:

Foundation

Chapter 2:

Scoping Review

This chapter covers the scoping review of empirical research involving the three-stage model. Most commonly, literature reviews are expansive, unsystematic, and selective. Pope et al. (2007) regarded traditional literature reviews of most doctoral theses and research reports to rely on individual experts when selecting, summarising and interpreting publications. Similarly, Paré et al. (2015, p. 183) described traditional literature reviews as opportunistic and unsystematic summaries of available literature and evidence. In contrast, with its exploratory approach, the present thesis on how money laundering works requires a different approach. Exploratory research aims to discover new ideas. Naturally, there is hardly any literature to review, and most available publications are of limited use for the exploratory endeavour. Stebbins (2001, pp. 43–44) defined the purpose of a literature review in exploratory studies as to demonstrate that little work has been done on the given topic and to justify an open-ended examination. Consequently, the literature review of this thesis needs a more targeted approach to identify publications about the three-stage model allowing to document knowledge gaps and future directions.

Recently, a new generation of literature reviews has become increasingly popular. These literature reviews are typically referred to as knowledge synthesis methods. Knowledge syntheses differ from traditional literature reviews as they entail a replicable protocol for study selection. Different methods of knowledge synthesis are available, depending on the purpose of the review (Dijkers, 2009; Grant & Booth, 2009; Kastner et al., 2012; Paré et al., 2015; Pope et al., 2007; Tricco et al., 2011). In this thesis, a scoping review protocol is used to systematically map existing empirical research, in which money laundering is conceptualised

as a three-stage process. The scoping review lends itself to this doctoral thesis because this kind of knowledge synthesis is specifically designed to determine key concepts, empirical evidence, and research methods used to examine emerging or heterogeneous topics (Arksey & O'Malley, 2005; Levac et al., 2010; Munn et al., 2018; Paré et al., 2015; Peters et al., 2015; Peterson et al., 2017; Pham et al., 2014; Tricco et al., 2016, 2018; Whittemore et al., 2014). For this reason, the scoping review protocol is ideal for mapping definitions and research methods used to investigate money laundering practices.

This scoping review follows the PRISMA-ScR protocol. PRISMA-ScR stands for Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews and was developed by an expert panel to improve reporting quality amongst scoping reviews. PRISMA-ScR was selected for this thesis on money laundering since it provides the most detailed guidance for scoping reviews. The PRISMA-ScR final checklist contains 20 mandatory reporting items and two optional items (Tricco et al., 2018, p. 1). Items range from applied eligibility criteria, bibliographic databases, and search strings to synthesising results. By way of comparison, Arksey and O'Malley's (2005) seminal work introduced the broad methodological framework for conducting scoping reviews comprising five stages. Levac et al. (2010) and the Joanna Briggs Institute (2015) later clarified the existing methodological framework by Arksey and O'Malley(2005) but lacked the fixed set of mandatory reporting items. Adopting the PRISMA-ScR protocol for this scoping review of empirical research concerning the three-stage model allows for a more reliable screening process.

This chapter is an original contribution for two reasons: First, this chapter is the first attempt to systematically determine the science behind the three-stage model, including key concepts and research methods. Simply put, the scope of empirical research about placement,

layering, and integration is assessed for the first time. Second, this chapter introduces the PRISMA-ScR protocol to the field of money laundering. As such, this chapter adds a standardised approach to the literature review, which is currently missing.

The chapter begins with the method section outlining each step of this scoping review. Following the PRISMA-ScR protocol, the section defines eligibility criteria, information sources, search strategy, selection of sources, data charting, text characteristics, and synthesising results. In the subsequent section, the results of this scoping review are reported, comprising study selection, general information, key concepts, and research methods. The final section presents the discussion of key findings and the strengths and limitations of this scoping review.

2.1 Method

This scoping review builds upon the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) protocol. PRISMA-ScR is a guideline that outlines a minimum set of elements to include in reports to increase transparency. The protocol covered 20 essential and two optional reporting items (Tricco et al., 2018, p. 467). Item checklist and explanatory paper are accessible online at www.prisma-statement.org.

2.1.1 Eligibility Criteria

Publications had to meet the following five criteria to be eligible for this scoping review. First, texts had to appear in English or German. This knowledge synthesis entirely relied upon the language skills of the reviewer. No professional translators were used. Second, published

research must be academic publications or grey literature. The former covered all formally written material by scholars building upon already published scientific work. The latter included research showing similar characteristics but produced outside of academia. With the key objective to map out research activities related to the three-stage model, studies that were not published in peer-reviewed journals such as dissertations, newspapers, blogs, podcasts, and magazines were not considered for this scoping review. Third, academic studies had to focus on money laundering conduct. Specifically, texts should address behaviours related to processing criminal property. By comparison, studies solely covering aspects such as the regulation, investigation, and prosecution of money laundering were not relevant to this scoping review. Fourth, publications needed to define either placement, layering, or integration. Conversely, studies that simply mentioned the three-stage model without clarifying their meaning were not eligible for this scoping review. Fifth, published studies had to be an original piece of empirical research. Any statements about the three stages of money laundering required supporting data collected specifically for this purpose. A study had to report, at a minimum, sample size and population, allowing the assessment of its empirical foundation. Failure to meet any of the five eligibility criteria made texts unsuitable for our scoping review of research and hence excluded.

2.1.2 Information Sources

The bibliographic database ProQuest Central was used to find potentially relevant publications. The rationale behind scoping reviews is to provide an overview of available scientific literature on emerging or heterogeneous topics (e.g. Arksey & O'Malley, 2005; Levac et al., 2010; Munn et al., 2018; Tricco et al., 2018). Coverage was, therefore, the key criterion for selecting

bibliographic databases. In September 2019, a preliminary search was conducted for the bibliographic databases Google Scholar, ProQuest Central, SCOPUS, and Web of Science to assess their coverage. Google Scholar provided the most comprehensive coverage with over 2,500 identified publications. However, a shortcoming of Google Scholar (2019) was that the database only shows up to 1,000 results for any particular search query. In other words, Google Scholar has an upper limit for accessing references. In comparison, the preliminary search in ProQuest Central returned 1,100 references. Finally, the test search in SCOPUS and Web of Science showed less than 20 hits each. Based on the preliminary findings, ProQuest Central promised the best coverage since the database allowed access to more than 1,000 references.

ProQuest Central (2019b) allowed access to 47 databases covering a variety of content from over 175 subjects. Databases that, by default, solely covered publications violating the eligibility criteria or subjects deemed irrelevant were excluded. For example, the database US Newsstream only included the most recent premium US news content and was excluded from the scoping review. Furthermore, Colonial State Papers were excluded from the search as the database dealt with the English colonial activities between the sixteenth and eighteenth centuries. The name, description, and coverage dates for the selected 27 databases can be found in Appendix I.

2.1.3 Search Strategy

Table 1 shows the exact search strategy used to identify potential publications in ProQuest Central. The search string included keywords related to the three-stage model in English and German. Boolean operators were used to specify the relationship between search terms. Furthermore, per the eligibility criteria, published research written in languages other than

English and German and irrelevant document types were filtered out. The final query was run in ProQuest Central on 9th September 2019.

Table 1

Search Strategy used for ProQuest Central

Search number	Searched for
S1	"money laundering" OR Geldwäsche
S2	placement AND layering AND integration
S3	(Platzierung OR Einschleusung OR Unterbringung OR Veranlagung) AND (Verwirrspiel OR Unkenntlichmachung OR Verteilung OR Verschleierung) AND (Integration OR Rückführung OR Zurückkanalisierung)
S4	(three-stage AND (concept OR model OR process)) OR (three-phase AND (concept OR model OR process))
S5	(Drei-Stufen AND (Modell OR Konzept OR Prozess) OR Drei-Phasen AND (Modell OR Konzept OR Prozess))
S6	S2 OR S3 OR S4 OR S5
S7	S1 AND S6
S8	(S1 AND S6) AND la.exact("ENG" OR "GER")
S9	(la.exact("ENG" OR "GER") NOT stype.exact("Trade Journals" OR "Dissertations & Theses" OR "Wire Feeds" OR "Newspapers" OR "Magazines" OR "Blogs, Podcasts, & Websites"))

2.1.4 Selection of Sources of Evidence

The selection process of the scientific publication for this scoping review involved five steps. First, after the search in ProQuest Central, the XLS files containing the key information of the identified references were downloaded. The XLS files include info such as Title, Abstract, and Authors. Second, the next step entailed identifying and removing duplicate records from the XLS file using Microsoft Excel. Third, the title and abstract of the identified studies were screened for eligibility. At this stage, studies were assessed against their publication type, whether they focused on money laundering conduct, and if they represented empirical work. Fourth, a full-text screening of the remaining publications was performed. Here, studies were

excluded if they failed to define the central concepts of placement, layering, and integration, or did not qualify as original empirical research. Fifth, in addition to the full-text assessment, a backward- and forward citation search for those studies meeting all eligibility criteria was conducted. The former involved checking the reference list of eligible texts. The latter used citation indices to identify publications that cite the respective text (Briscoe et al., 2019, p. 2). The forward citation search in Google Scholar added further studies to this scoping review if they met the eligibility criteria.

2.1.5 Data Charting Process

Data charting is obtaining and categorising information from selected texts (Arksey & O'Malley, 2005; Levac et al., 2010; Peters et al., 2015; Tricco et al., 2018). To that end, screened publications that met the eligibility criteria were downloaded and imported into NVivo 12 (2019), a software that allows organising unstructured data. Next, the text characteristics were coded in NVivo 12.

2.1.6 Text Characteristics

Table 2 shows the text characteristics determined in this scoping review. This scoping review focused on three sets of text characteristics to map out current key concepts and research methods for studying how money laundering works. First, text characteristics covering the general information included the study's lead author, publication year, scientific discipline, and research question/type of research. The lead author and publication year were derived from the publication. The scientific discipline was determined based on the name of journals, book series, and book editions. To illustrate, the reviewed study by van Duyne (2003) was part of a

volume bringing together different studies focusing on organised crime and was hence, considered organised crime research. The type of research was determined based on the reported research question. Based on their research question, studies were classified as either descriptive or explanatory research. The former asks what can be observed about a given phenomenon. The latter seeks to understand why something can be observed (De Vaus, 2001, p. 1). Second, text characteristics about key concepts covered the reported definitions for placement, layering, and integration. The rationale for reviewing existing definitions was to capture ambiguities and enable operationalisation in the later parts of this dissertation. The goals and activities of placement, layering, and integration defined by each study were compared to determine conceptual boundaries. Third, text characteristics also covered the research methods used to study money laundering behaviour. The relevant characteristics comprised data collection, units of observation, sample size, data analysis, and country of observation. The information was taken as reported in the individual studies.

Table 2

Text Characteristics Determined in Scoping Review

Set	Characteristic	Definition
General information	Lead author	Full name of the first author of a text.
	Year	Year of publication.
	Scientific discipline (s)	Affiliated field(s) of research of a text based on name of journals, book series, book edition, etc.
	Type of research	Descriptive and explanatory research objective.
Method	Data collection	Techniques to gather and measure information.
	Unit of observation	Object about which information is gathered.
	Sample size	Number of subjects in a study
	Data analysis	Procedures to analyse the collected information.
	Country of observation	Country or countries where the observations were made.
Key concepts	Placement	Definition of placement.
	Layering	Definition of layering.
	Integration	Definition of integration.

2.1.7 Synthesis of Results

Frequency distribution and measure of central tendency were calculated to summarise the text characteristics of studies included in this scoping review. Measures of central tendency were calculated in Microsoft Excel, comprising the mode for categorical data and the mean for continuous data.

2.2 Results

This section outlines the findings of the scoping review for empirical money laundering research. The main objective of this scoping review has been to map out key concepts and research methods of empirical studies where money laundering is conceptualised as a three-

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stage process. Figure 2 summarises the key findings of this scoping review, including the selection process, general information, research methods, and critical concepts found in eligible publications. Ten studies met the eligibility criteria and were published between 2003 and 2017. Most studies were contributions from money laundering, organised crime, and financial crime research, focusing on describing different aspects of the crime. However, the reviewed publications often comprised definitions for placement, layering, and integration that could be more specific and consistent. Furthermore, the utilised research methods were generally reported haphazardly. If reported, studies documented interviews, questionnaires, and experiments for gathering data from experts, criminals, and official documents. In addition, statistics and qualitative content analysis were used to analyse the collected data. Overall, the included publications in this scoping review needed to be more transparent in their treatment of various key concepts and failed to report the applied research methods. The findings for study selection, general information, key concepts, and research methods will be detailed below.

Figure 2

Scoping Review Results

Study selection
- Identified studies: **N = 766**
- Studies included in scoping review: **N= 10**

General information
- Published year: **2003** and **2017**.
- Scientific disciplines: **Money laundering, organsied crime,** and **financial crime research.**
- Type of research: **Descriptive**

Key concepts
- **Placement:** Illegal money is introduced into the financial system.
- **Layering:** Hiding/legitimising illegal funds.
- **Integration:** Moving criminal funds into the legitimate economy.

Research methods
- Data collection: **Interviews, questionnaires,** and **experiments.**
- Data sources: **Experts, criminals,** and **official documents** from **Austria, Bulgaria, Canada, Germany, Italy, Liechtenstein, Netherlands. Switzerland,** and **United Arab Emirates**
- Data analysis: **Statistics** and **qualitative content analysis.**

2.2.1 Study Selection

The study selection comprised four stages, namely identification, screening, eligibility, and inclusion. Figure 3 shows the PRISMA flow diagram (Moher et al., 2009, p. 3) illustrating each step of the study selection process for this scoping review. The *identification stage* comprised 766 records that were identified using the search strategy for 27 databases in ProQuest Central. After this, 25 duplicates were manually removed from the identified publications. The *screening stage* included assessing titles and abstracts of 741 records screened for eligibility. At this stage, 674 publications failed to meet the eligibility criteria. Particularly, 16 texts did

not represent academic work but included book reviews and legal texts. Six-hundred-and-thirty-one publications had research objectives other than the criminal conduct of money laundering. These texts focused on terrorist financing and the practical aspects of money laundering control. Twenty-seven publications discussed the money laundering process from a theoretical perspective but did not include any empirical examinations. The e*ligibility stage* entailed the full-text assessment for eligibility of the 67 remaining publications was conducted. Fifty-nine texts were deemed not suitable for the scoping review. Of the excluded publication, 15 texts either did not mention the three-stage model or failed to define placement, layering, and integration. Forty-four studies did not base their analysis on an original sample. Instead, these publications resorted to fictional illustrations and anecdotal evidence to support claims about the money laundering process. In the final stage, a backward- and forward citation search for the eight *included* texts was performed. In doing so, two additional publications meeting the eligibility criteria were identified. Ten studies meet the eligibility criteria for this scoping review of empirical research about the three stages of money laundering.

Figure 3

PRISMA Flow Diagram
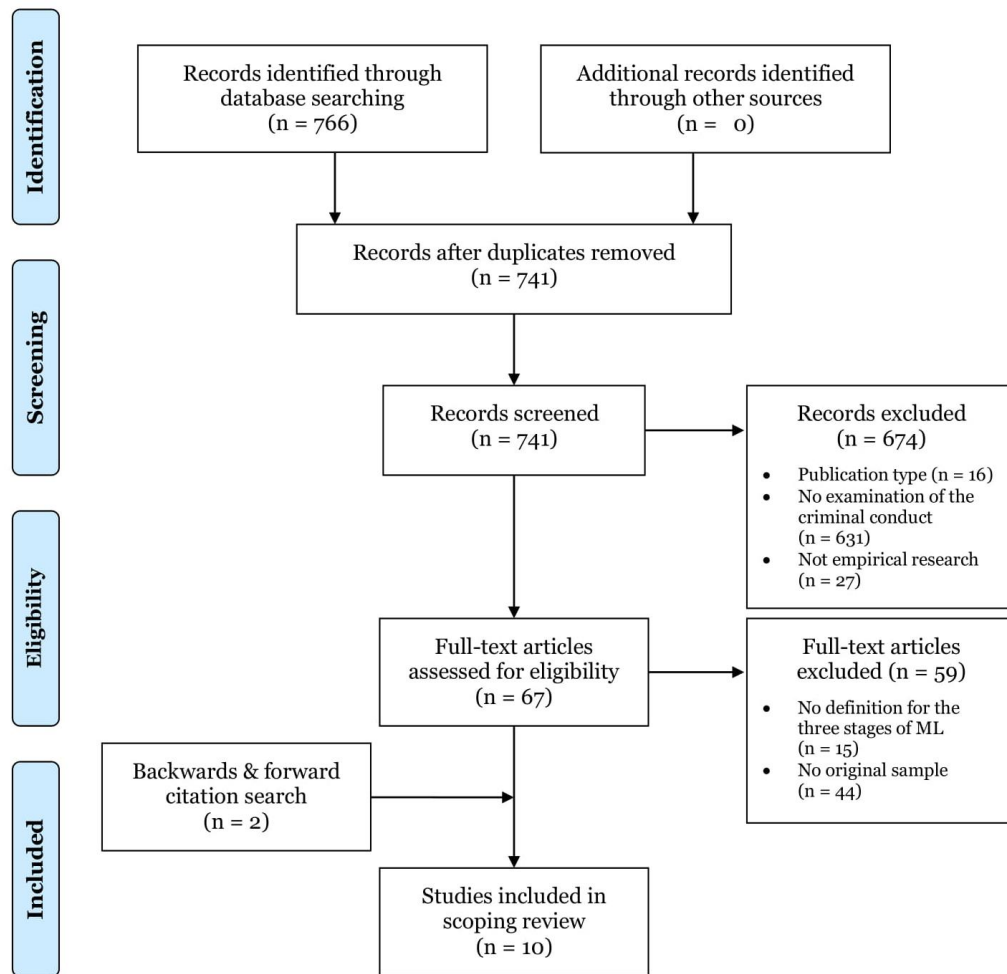
2.2.2 General Information

This section outlines the general information of the studies included in this scoping review. Characteristics included the lead author, publication, scientific discipline, and aim of the published research. An overall summary of the charted data is presented in the text below. Additionally, the characteristics of the individual texts are reported in full in Appendix II.

2.2.2.1 Lead Researcher. The publications included work from six different lead investigators. Three of six authors accounted for seven of the ten texts. The most frequently

occurring author was Melvin Soudijn, a senior researcher at the Dutch National Police Woerden (Soudijn, 2019). He contributed three publications that met the eligibility criteria of this scoping review. Angela S. M. Irwin from the University of South Australia and Petrus C. van Duyne from the University of Tilburg authored two publications each.

2.2.2.2 Publication Year. The publications covered 15 years, from 2003 to 2017. Two studies were published in 2012. The remainder were published in 2003, 2004, 2005, 2010, 2011, 2014, 2016, and 2017. No study included in this scoping review was issued before 2003 and after 2017.

2.2.2.3 Scientific Discipline. Reviewed publications originated from three research areas. The most observed field of study was money laundering research. Five of ten academic texts were published in the Journal of Money Laundering Control (Irwin et al., 2012, 2014; Soudijn, 2010, 2016; Teichmann, 2017), which solely focuses issues on in law, regulation, and control of money laundering (Emerald Publishing, 2022). In addition, four texts were published in journals and volumes focused on organised crime (Petrunov, 2011; Soudijn, 2012; van Duyne, 2003; van Duyne & Levi, 2005). Finally, a single publication was affiliated with financial crime research (S. Schneider, 2004).

2.2.2.4 Type of research. Studies included in this scoping review were classified as descriptive research. The reported research questions of the reviewed studies all aimed to describe various aspects of the money laundering process. None of the reviewed publications aimed to explain why the sequence of placement, layering, and integration should be expected.

2.2.3 Key Concepts

In this section, the reported definitions for the three-stage model are reviewed. The rationale was to understand if the reviewed publications shared a consistent understanding of placement, layering, and integration. However, the findings of this scoping review showed that placement, layering, and integration were often defined very differently in the reviewed publications. The variations amongst definitions are outlined below. In addition, the verbatim definitions from the studies included in this scoping review can be found in Appendix III.

2.2.3.1 Placement. The screened studies comprised homogeneous but vague definitions for the placement stage. For the most part, the purpose of placement was defined as introducing criminal proceeds into the financial system (Irwin et al., 2012, 2014; Petrunov, 2011; Soudijn, 2010, 2012, 2016; van Duyne, 2003; van Duyne & Levi, 2005). Only one study referred to placement as illegal funds being introduced into the legitimate economy and not financial institutions (S. Schneider, 2004, p. 282). Nonetheless, all but one definition failed to specify how offenders introduce criminal proceeds into the financial system. The specific activities associated with placement were considered to entail cash deposits into bank accounts (Soudijn, 2012, p. 150). Overall, most studies defined placement as the stage where illegal money (cash) is introduced (deposited) into the financial system (bank account).

2.2.3.2 Layering. The layering stage was generally defined inconsistently. The publications eligible for this scoping review contained definitions of layering with different understandings of the purpose and activities of this money laundering stage. First, in five of ten publications, the sole purpose of layering was defined as hiding the illegal origin of proceeds (Irwin et al., 2012, 2014; Petrunov, 2011; S. Schneider, 2004; Soudijn, 2012). In contrast, some authors defined the primary goal of layering as equipping criminal proceeds

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with a fake legitimate origin (Soudijn, 2010, 2016; Teichmann, 2017). Finally, two studies defined layering as the stage for preparing and performing financial transactions (van Duyne, 2003; van Duyne & Levi, 2005). Second, the authors attributed various actions to the layering stage. Three publications referred to layering as a series of financial transactions (Irwin et al., 2012, 2014; Petrunov, 2011). Two studies understood layering to divide funds into smaller amounts before making financial transactions (van Duyne, 2003; van Duyne & Levi, 2005). Lastly, two publications defined the use of front companies and false bookkeeping as a central part of layering (S. Schneider, 2004; Soudijn, 2012). Together, layering was defined inconsistently, with different meanings of the exact purpose and related behaviours.

      2.2.3.3 Integration. The integration of criminal funds was only vaguely defined. Even though the reviewed studies shared a common understanding of the purpose of integration, there was no consensus about the activities typical for the last stage of the money laundering process. On the one hand, most studies defined integration as the stage of the money laundering process where criminal proceeds were moved from the financial system into the legal economy (Irwin et al., 2012, 2014; Petrunov, 2011; S. Schneider, 2004; Soudijn, 2010, 2012, 2016; Teichmann, 2017). However, the descriptions of how offenders move criminal proceeds from the financial system into the legal economy remained vague. Of the ten studies, five publications covered spending and investing activities (Irwin et al., 2014; Petrunov, 2011; Soudijn, 2010, 2012, 2016). Two publications described efforts to merge previously divided funds (van Duyne, 2003; van Duyne & Levi, 2005). In addition, three studies did not further define what activities occur at the integration stage (Irwin et al., 2012; S. Schneider, 2004; Teichmann, 2017). With ambiguous descriptions of how integration is achieved, the conceptual boundaries of the final money laundering stage are fuzzy.

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2.2.4 Research Methods

This section outlines the research methods reported in the publications eligible for this scoping review. Study characteristics included data collection, unit of observation, sample size, data analysis, and country. A detailed account of the research methods for each study can be found in Appendix IV.

2.2.4.1 Data Collection. The findings of this scoping review revealed three distinct techniques used to gather data about the money laundering process. First, the most reported methods of data collection were interviews. Five of the ten publications relied on expert interviews to gather information about the money laundering process (Petrunov, 2011; Soudijn, 2010, 2012, 2016; Teichmann, 2017). Second, two studies reported questionnaires and surveys as data-gathering methods (S. Schneider, 2004; Teichmann, 2017). Third, one study reportedly relied on experiments (Irwin et al., 2014). Nonetheless, it is essential to note that one of the included texts reported multiple data collection methods (Teichmann, 2017). Equally important, three texts did not detail how researchers collected data.

2.2.4.2 Unit of Observation. The studies included in this scoping review reported multiple units of observations. First, the most frequently reported unit of observation was expert judgments. Five publications gathered information on money laundering from compliance officers, criminals, and law enforcement personnel (Petrunov, 2011; Soudijn, 2010, 2012, 2016; Teichmann, 2017). Second, four publications documented the use of agency records of public organisations. Agency records included suspicious activity reports and criminal case files for investigating money laundering behaviour (Irwin et al., 2012; S. Schneider, 2004; van Duyne, 2003; van Duyne & Levi, 2005). Third, one study replicated real-

world money laundering practices in the virtual space and scored them for feasibility. Here, the authors performed the scoring exercise themselves (Irwin et al., 2014).

2.2.4.3 Sample Size. The average sample size was $N = 90.7$ ($SD = 74.82$) for the given unit of observation. At the upper end of the spectrum was Teichmann's (2017) work with a sample of $N = 209$. At the lower end was Irwin et al.'s (2014) study recording a sample size of six. A common feature of most studies was that it was not specified whether the drawn sample was representative. The exceptions were Schneider (2004) and Soudijn (2010), where the former reported a representative sample and the latter a non-representative sample. Table 3 shows the reported sample size per publication.

Table 3

Sample Size per Publication

Reference	N
Teichmann (2017)	209
Irwin, Raymond Choo and Liu (2012)	184
Petrunov (2011)	152
Schneider (2004)	149
Soudijn (2010)	62
Van Duyne (2003)	52
Soudijn (2016)	46
Van Duyne and Levi (2005)	25
Soudijn (2012)	22
Irwin et al. (2014)	6

2.2.4.4 Data Analysis. The findings of this scoping review showed that there is little emphasis on systematic data analysis. In particular, seven studies did not report any data analysis method. By comparison, only two publications reported using statistics as a data

analysis procedure (Irwin et al., 2012; S. Schneider, 2004). Furthermore, a single study referred to qualitative content analysis as the applied data analysis technique (Teichmann, 2017).

      2.2.4.5 Country of Observation. The examined publication in this scoping review included data from nine countries. The most frequently reported country was the Netherlands, with five studies from this part of the world. The remaining locations included Austria, Germany, Italy, Liechtenstein, Switzerland, United Arab Emirates, Bulgaria, and Canada and were each mentioned in a single publication. Teichmann's (2017) study comprised data from six of the nine geographic locations observed in this scoping review. Two publications did not specify where the data collection occurred (Irwin et al., 2012, 2014).

2.3 Discussion

This section outlines the main findings as well as the strengths and limitations of this scoping review. Generally, the results indicated various shortcomings in the current scientific discussion on how money laundering works. There is no rigorous conceptual framework for the three-stage model, and there is hardly any empirical support for the validity of central claims. Ultimately, the scoping review demonstrates that the scientific foundation of the three-stage model as the standard representation of money laundering is weak.

2.3.1 Key Findings

There are eight main points to be taken from the scoping review. First, of 766 references derived from 27 bibliographic databases, only ten publications involved empirical research. The small number of included studies is an important finding because it suggests that barely

any empirical work has been done on what is arguably the most influential paradigm in money laundering research. It might be argued that the results simply reflect a general shortage of research in the broader field of money laundering. However, there is an extensive body of publications on various aspects of the crime. Van Duyne et al. (2018, p. 30) conducted a high-level search for research on money laundering and its control across 13 databases and identified over 6,700 references in 2014. With only ten publications identified in this scoping review, empirical work including the three-stage model is comparatively rare, even within money laundering research.

Second, the meaning of the three-stage model varied across publications. Another striking finding of this scoping review is that the reviewed publications reported multiple definitions for the key concepts of placement, layering, and integration. With the exception of two studies (van Duyne, 2003; van Duyne & Levi, 2005), the purpose and activities of distinct stages of the money laundering process varied significantly across the reviewed publications. Even though some definitions partially overlap for individual stages, the three-stage model is everything but a homogeneous conception of the money laundering process. For the remainder of this doctoral thesis, the key concepts of placement, layering, and integration are defined as follows: Placement aims at introducing money, particularly cash, into the financial system by making deposits into bank accounts. Layering aims to disguise the true origin of criminal proceeds using financial transactions. Integration seeks to merge criminal proceeds with the legal economy by making simple spending or investments.

Third, empirical research involving the three-stage model has only been carried out since the early 2000s. The date is noteworthy given that the three-stage model's introduction predates its empirical examination by many decades. While the authorship of the three-stage

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model is a subject for debate, the literature places its origin sometime in the 1980s (Cassella, 2018; Soudijn, 2016; e.g. van Koningsveld, 2013). By way of comparison, all eligible studies identified in this scoping review were published in 2003 or later. The findings of this scoping review suggest that research and practice relied on the three-stage model for over two decades without testing its central claims empirically.

Fourth, there is no explanatory research about the three-stage model. All studies covered in this scoping review can be considered descriptive research since they focused on outlining various aspects of the money laundering process. No publication included in this scoping review asked why offenders launder money in a particular manner. However, the lack of explanatory research related to the three-stage model should be considered a significant knowledge gap in the field of money laundering. Scientific explanations aim to identify the causes of phenomena (Van Evera, 1997, p. 8). Without any explanatory research, the scientific community and practice lack the knowledge to create effective countermeasures against money laundering.

Fifth, research methods were generally poorly reported. The level of detail for reporting the individual steps of data collection and analysis was often very rudimentary. On the one hand, the setup of interviews and questionnaires used for the data collection was not always specified. For instance, some studies failed to disclose how participants were selected or if surveys were administered via mail, face-to-face, phone, or in group settings. Likewise, studies utilising official documents did not specify the procedure for extracting information from those texts. The lack of detail is surprising since there are established methods to collect textual information systematically, such as content- and thematic analysis (e.g. Braun & Clarke, 2006; Krippendorff, 2019; Neuendorf, 2017, 2019; Vaismoradi et al., 2013). On the other hand, most

studies did not report any data analysis methods. The reader often had to guess how and why the collected information was processed in a particular way. Altogether, the reporting quality for data collection and analysis methods was poor and did not allow for replication.

Sixth, data on money laundering is still expensive to collect and hard to access. Most studies included in this scoping review used interviews and questionnaires for data collection. Each data collection method comes with limitations. The former can be costly and time-consuming, while the latter can be plagued by poor response rates (Coughlan et al., 2009). Furthermore, both methods were used to collect information from experts, such as compliance officers or criminal- and financial investigators. Even though these approaches may be feasible for well-established scholars with the required funding and contacts, it is potentially not workable for doctoral students and early-career postdoctoral researchers lacking both funds and access to experts. The problem may be mitigated by online survey tools that reduce overall costs (Sue & Ritter, 2012) and social media platforms that allow access to experts worldwide. There is room for further progress in identifying cheaper and more accessible data on money laundering bearing the potential to normalise empirical research.

Seventh, the samples in the reviewed studies did not allow for generalisations. The included publications in this scoping review reported, on average, only a small number of participants or subjects for the given samples. In addition, only one study reported a representative sample. Most studies did not specify how the sample was drawn, and it could not be assessed if a sample was representative of the population under investigation. With small sample sizes and potential sample biases, the reviewed studies were at risk of not accurately representing the money laundering phenomenon (Acheson, 2012; Fritz & Morgan, 2010; Kadam & Bhalerao, 2010). Indeed, the units of observation varied greatly across individual

studies, making it challenging to compare samples. Nevertheless, it is doubtful that these samples are a basis for generalising about how money laundering works.

Eighth, empirical research relied disproportionately on data from the Netherlands. Half of the included studies in this scoping review used Dutch data to examine money laundering empirically. One possible explanation may be the country's reputation as a safe haven for illegal proceeds. The Netherlands ranks 8th in the most recent Financial Secrecy Index, making it one of the top jurisdictions offering exceptional financial secrecy (Tax Justice Network, 2020a, p. 1). An alternative explanation is that the respective studies' lead authors were Dutch-based. Regardless of the specific reasons, more empirical research is needed to examine money laundering in other countries.

2.3.2 Strengths and Limitations

This section outlines the strengths and limitations of this scoping review of money laundering. The key strengths of this chapter are twofold. First, the chapter has introduced the scoping review approach to money laundering research, which has predominately been applied in different scientific disciplines. Pham et al. (2014, p. 376) examined 344 scoping reviews and found that most studies were published after 2010 in health science and software engineering. Second, the scoping review introduces the PRISMA-ScR protocol to the money laundering research. The PRISMA-ScR protocol offers guidance beneficial to researchers that aim to replicate the present scoping review or map out research areas in the field of money laundering not covered in this scoping review.

The limitations of the present scoping review were threefold. First, this scoping review was limited to texts in English and German language. Consequently, publications potentially

relevant to this scoping review and written in other languages have not been included. Second, knowledge synthesis methods heavily rely on bibliographic databases. Mistakes on the end of database providers have profound consequences for the findings. The same was true for the present scoping review. For example, due to inaccuracies in the database entry, Suendorf's (2001) empirical study on money laundering was not included in the present scoping review due to inaccuracies in the database entry. The database provider had declared her study wrongfully as non-academic text, ultimately eliminating it. Third, the search strings and databases selected by researchers affect the results of scoping reviews. Therefore, there was the potential risk of excluding relevant studies simply because of selecting the wrong keywords and databases. All of the above limitations were mitigated by performing a backward- and forward citation search, which allowed identifying references not covered through the database search.

2.4 Conclusion

The scoping review's main goal was to map out essential concepts and empirical research methods related to the three-stage model. Even though the three-stage model remains most influential in research and practice, rigorous scientific work has been the exception. The scope of research on this topic has been minimal since only ten empirical studies could be identified. Moreover, the critical concepts of placement, layering, and integration were defined differently across studies, so there is currently no consensus on the meaning of the three-stage model. Lastly, empirical studies were exclusively descriptive and relied on small and unrepresentative samples, for which research methods were only reported haphazardly. Overall, this scoping

review demonstrates that more empirical work needs to be done, highlighting the need for an

open-ended investigation of how money laundering works.

Chapter 3:

Method

There is a need to explore money laundering beyond the boundaries of the three-stage model. In this chapter, the method to explore how money laundering works from a crime science perspective is introduced. The first section recaps the decision to use court transcripts as this study's primary data source. Next, the quantitative approach to content analysis is introduced as the data collection method of this thesis. The subsequent sections then outline the design of the quantitative content analysis, followed by a separate discussion of its design components, unitising, reliability test, sampling, and coding. The final section introduces data analysis techniques employed throughout the dissertation, covering analytical strategy, code and word frequency counts, and cluster analysis. Together, the method outlined in this chapter enables an open-ended exploration of money laundering.

3.1 Primary Data Source

Data is at the heart of any scientific exploration, where trends or patterns are inferred from empirical evidence (De Vaus, 2001; Heit, 2007; Reiter, 2013, 2017; Stebbins, 2001). This section introduces court transcripts as the primary data source of this thesis. Money laundering research has utilised only a few kinds of data. In particular, the findings of the earlier scoping review showed two types of data sources for studies on the three-stage paradigm. First, most empirical work on the three-stage paradigm queried experts, namely offenders and anti-money laundering professionals. Researchers used survey methods such as interviews or questionnaires to collect data from participants (Petrunov, 2011; S. Schneider, 2004; Soudijn, 2010, 2012, 2016; Teichmann, 2017). Second, academic research relied on agency records

concerning money laundering for data collection, with information from governmental organisations such as financial intelligence units (Irwin et al., 2012) and police forces (van Duyne, 2003; van Duyne & Levi, 2005) for their data collection. Experts and agency records together represent the primary data source of past empirical money laundering research.

Using experts as the primary data source was not viable for two reasons. First, understanding money laundering as a three-stage process has been central to training anti-money laundering specialists. For example, Sullivan (2015, p. 6) describes the three-stage model as part of anti-money laundering tests or certification. Therefore, the thesis would risk relying on expert opinions that might be conditioned to view money laundering through the lens of the three-stage model. From this perspective, expert opinions were not considered feasible for the present thesis. Second, no prior contacts with either criminals or professionals working in anti-money laundering were in place when planning this exploratory study. The lack of prior contacts was a considerable constraint in selecting adequate data sources. Offenders are a hard-to-reach population, making them difficult to identify, contact, persuade, and interview (Pawelz, 2018; Sydor, 2013; Tourangeau, 2014). Even if professionals working in anti-money laundering might be easier to access than criminals, the time and interest on the part of the practitioner are weighty access barriers. Moreover, specialists may regard survey requests as spam or intrusive behaviour if contacted online (Littig, 2008; Wright, 2006). Using experts as a data source was consequently neither regarded as analytically sound nor easily accessible.

Agency records appeared to be more accessible. Governmental organisations such as police forces, criminal courts, and juvenile authorities generate information that can be utilised for crime-related research. Some are published, and others remain for internal use and may be

requested (Maxfield & Babbie, 2015, pp. 330–332). During the development of the present enquiry, money laundering research had already begun to utilise published agency records. For example, Reuter and Truman (2004, p. 32) collected 223 money laundering cases from the records of two intergovernmental agencies, comprising a compilation of 100 sanitised money laundering cases published by the Egmont Group (2001) and reports from the Financial Action Task Force (2021). Agency records were overall considered more accessible than convincing experts to participate in this study.

Agency records are utilised in money laundering research differently. It is helpful to distinguish between primary and secondary data. *Primary data* are first-hand and unfiltered information collected for a distinct research purpose. In comparison, *secondary data* is re-analysed information initially collected to answer the different research questions (Boslaugh, 2010; Persaud, 2010). In money laundering research, agency records have been used as primary and secondary data. To illustrate, van Duyne (2003) analysed money laundering practices based on raw information from files of 159 criminal recovery cases in the Netherlands. By comparison, the already mentioned study by Reuter and Truman (2004) relied in part on already processed information from the Egmont Group (2001), a collection of 100 money laundering cases which had been altered to minimise the risk of specific case being identified. Within the field of money laundering, agency records are commonly used as primary and secondary data for empirical research.

The agency records selected for this doctoral thesis were court transcripts. A new dataset was created based on full judgment transcripts from the Court of Appeal and the Administrative Court of England and Wales. The court documents were accessible through the online archive Casetrack (2017), which covers over 80,000 transcripts from 1996 to 2017.

Casetrack services were subject to charges, but University College London provided its students with free access. Unfortunately, the archive was closed in February 2017. However, all relevant transcripts were manually downloaded and saved before the closure of Casetrack. As such, the closure did not affect the data collection of this study. Today, the transcripts can be accessed through alternative services like ICLR Online, Justis, Lexis and Westlaw (Inner Temple Library, 2020). However, access to other databases was not required for this doctoral thesis since relevant transcripts had already been gathered prior to Casetrack's closure.

Using full judgment transcripts as the primary data source is not without challenges. There are at least four potential limitations when using court transcripts as the primary data source of a study. First, court transcripts may reflect biases of the criminal justice system. For instance, Bright et al. (2022) discussed the challenges of using criminal justice records, such as offender databases, investigative records, prosecution files, or court files, for social network analysis. The authors noted that the data might be biased by reflecting the goals of investigations targeting particular criminal networks or high-ranking individuals. Likewise, Riccardi and Levi (2018), who examined the relationship between cash usage and anti-money laundering, described similar investigation biases concerning money laundering inquiries. The authors emphasised that while cash seizures are relatively easy executed, the costs and regulatory hurdles to confiscate non-monetary criminal assets such as real estate, vehicles, or business are much higher. The police may therefore be incentivised to focus money laundering investigations on cash because it is easier to implement. Second, court transcripts can contain incomplete information. Certain details of the reading of the verdict might not be adequately documented during the transcription process. There are different transcription errors that can alter the information in court records. For instance, Haworth (2018) discussed possible contaminations of police-suspect interviews from the initial interview to their presentation as

evidence in a courtroom, including possible inaudibility during recordings, problems with translating and interpreting the spoken word into text (which can be subjective and inexact), extensive editing, and the subsequent oral presentation. In addition, Hennik and Weber (2013) assessed the quality of transcripts from traditional transcriptionists with court reporters for reviewing 16 transcripts from 8 focus groups, identifying key differences in transcription errors and the time and costs of using transcriptionists and court reporters. Their findings indicate that errors made by transcriptionists did not change the topical content of the data being transcribed. In contrast, errors of court reporters were observed more frequently, with the potential to change the meaning of what was said. Third, court transcripts might not be representative. The sample of cases covered in full judgment transcripts may not be represent the broader population of offences. There are at least two factors that can cause representation biases in official data. For one thing, ensuring accurate representation in criminal justice data is not the primary objective. For example, Maxfield and Babbie (2016) highlighted that agencies tend to collect data for their own use and not to enable research. Court transcripts fall into this category as they are the result of legal requirements. Additionally, not all committed crimes are reflected in official crime data. For example, Hagan and Daigle (2020) pointed out that not all committed crimes are discovered. And even if discovered, crimes may not be reported by victims or recorded by the police. The authors' observations are anything but trivial since they address an inbuilt problem of criminal justice data: not all criminals are reflected in official crime data. Fourth, court transcripts could raise concerns about data privacy. Full judgment transcripts can contain sensitive and personal information about the parties involved in offences. For instance, Townend and Wiener (2021) considered data privacy issues a key challenge for developing justice data systems. The authors described these challenges as the result of tensions between privacy rights of individuals whose personal data is being publicised and transparency in the

provision of court records. Using court transcripts as primary data source can therefore raise concerns about the data privacy of those individuals that have been featured in court hearings.

Regardless of their limitations, full judgment transcripts can serve as an accessible data source with distinctive attributes, rendering them an excellent primary data source for this thesis. There are at least three reasons why selecting full judgment transcripts was deemed optimal for exploring how money laundering works. First, full judgment transcripts are *original data*. Using full judgment transcripts from the United Kingdom adds a new perspective to the current debate. The results of the scoping review in chapter 2 showed that empirical research on the three-stage model mainly utilised information from Austria, Bulgaria, Canada, Germany, Italy, Liechtenstein, Netherlands, Switzerland, and United Arab Emirates (Petrunov, 2011; S. Schneider, 2004; Soudijn, 2010, 2012, 2016; Teichmann, 2017; van Duyne & Levi, 2005). With the City of London and its offshore jurisdictions, the United Kingdom stands out as an attractive destination for criminal capital worldwide (Tax Justice Network, 2020b), offering a new perspective for studying how money laundering works. Second, full judgment transcripts are *primary data* about money laundering. A transcript is a written record of what was said at a hearing, trial, or tribunal (The Crown, 2020). This way, court records give access to unfiltered information about money laundering practices presented in court. Third, full judgment transcripts cover *credible data*. Generally, information is regarded as credible if it is undistorted and sincere (Scott, 1990, p. 6). Full judgment transcripts were thought credible because legal trials involve multiple sources to assess the course of the crime (Porter, 2008). To illustrate, the Crown Prosecution Service (2018) uses information such as accomplice statements, forensic evidence, and audit trails to produce evidence that the property in question is of criminal origin. The information in transcripts can be considered credible if a suspect is convicted. All things considered, full judgment transcripts represent a

valuable and accessible data source for this thesis, comprising original, unfiltered, and credible information on money laundering.

At this point of the thesis, full judgment transcripts cannot simply be analysed. Considering the potential limitations, court transcripts and other agency records should not be treated as data that is ready for analysis. Instead, researchers likely need to process agency records before their investigation. For example, Jacobs (1984) summarises the situation for researchers as follows:

> Whether data are found in libraries or data archives, they should not be viewed simply as providing grand opportunities for cheap analyses; they should be seen as problematic…. It is the duty of the analyst to discover the flaws and, if possible, to correct them. (Jacob, 1984, pp. 43–44)

The next sections outline how to generate data from the full judgment transcripts highlighting potential problems and ways to overcome them.

3.2 Content Analysis

This section introduces content analysis as a data collection method for court transcripts. Content analysis is a scientific method for enquiries into human communication. Early forms of content analysis date back to journalism and the field of literature at the turn of the 20th century. The former was concerned with the specific content of newspapers, the latter with stylistic characteristics of English poetry and prose. From 1930 onwards, political scientists used content analysis to study new forms of mass communication, including radio and television. Their interest lied in problems with public opinion and propaganda (Berelson, 1971; Krippendorff, 2019). Today, content analysis has been applied to all kinds of human

communication, including audio recordings, images, telephone conversations, television shows and movies, texts, and social media (Drisko & Maschi, 2015, p. 8).

One content analysis is not like another. From its beginnings, the defining characteristics of content analysis have generated substantial disagreement. For example, Holsti (1969) highlights two features as the separating line among definitions:

> Along with general consensus that objectivity, system, and generality are defining characteristics of content analysis, two other proposed requirements have generated considerable debate in the recent literature. First, must content analysis be quantitative? Second, must it be limited to the manifest content, or may it be used also to probe for more latent aspects of communication? (Holsti, 1969, p. 5)

On the one hand, defining content analysis as a *quantitative,* numerical procedure has prompted criticism from those who see a *qualitative*, non-numerical approach to produce more meaningful inferences. On the other hand, content analysis has been limited to *manifest content*, which are features that appear in communication. The restriction created disagreement among those who also want to analyse *latent content*, namely the layers of meaning in communications beyond the tangible (Holsti, 1969, pp. 10–13). Disagreements about the defining characteristics have led to rival approaches to content analysis.

Current literature primarily distinguishes between quantitative and qualitative approaches to content analysis. *Quantitative content analysis* involves assigning numerical values to features of human communication (Berelson, 1971; Neuendorf, 2017; Riffe et al., 2014). Because of this, the quantitative approach to content analysis is effectively a data collection method that enables statistical analysis (Franzosi, 2008; Schreier, 2013). On the other hand, *qualitative content analysis* is used to interpret human communication (Hsieh &

Shannon, 2009; Krippendorff, 2019; Mayring, 2014). As the researcher goes beyond collating information from human communication, the qualitative approach to content analysis is, in fact, a data analysis method (Franzosi, 2008; Schreier, 2013). The use of quantitative or qualitative content analysis can vary across scientific disciplines (Drisko & Maschi, 2015, p. 28).

Money laundering research typically uses the qualitative approach to content analysis. Harvey and Lau (2009), for instance, conducted a qualitative content analysis of annual reports from banks to examine their disclosure concerning their anti-money laundering activities. Likewise, Hutchings and Holt (2015) performed a qualitative content analysis of forum posts to understand the online black market economy, including money laundering services. Lastly, Teichmann (2020) applied a qualitative content analysis framework to written memory protocols of interviews with criminals to examine money laundering in the jewellery business. From this perspective, money laundering research has considered content analysis a qualitative approach.

In this thesis, a quantitative approach to content analysis is selected. The reasons for choosing a quantitative over qualitative approach have been twofold. First, quantitative approaches enabled the use of statistical tools. By assigning numerical values to text characteristics in court transcripts, statistics procedures can be used to summarise and discuss the features of money laundering incidents (Drisko & Maschi, 2015; Neuendorf, 2017; Riffe et al., 2014). Second, quantitative approaches were deemed more objective. As quantitative approaches are limited to manifest content, they do not rely on individual researchers to make extensive and possibly subjective interpretations (Drisko & Maschi, 2015; Maxfield & Babbie, 2015; Mayring, 2014; Neuendorf, 2017). The quantitative approach to content analysis was

therefore considered the superior approach. *Content analysis* is defined as "the objective, systematic, and quantitative description of the manifest content of communication" (Berelson, 1971, p. 18). The procedure to assign numerical values to text features in court transcripts is outlined in the next section.

3.3 Design

This section outlines the design of this quantitative content analysis. The methodological literature portrays content analysis as a flexible procedure. Krippendorff (2019) summarises the interplay of design features for both qualitative and quantitative approaches as follows:

> A content analysis design may include iterative loops - the repetition of particular processes until a certain quality is achieved. Or components may recur in various guises…. Moreover, a content analysis could use components that are not specifically highlighted…. Finally, it is important to note that there is no single "objective" way of flowcharting research designs. (Krippendorff, 2019, p. 90)

The design features essential for one content analysis might be meaningless for others. Researchers, therefore, have to adjust the content analysis design to the specific needs of the investigation.

The development of this content analysis has been an iterative process. Over three years, there was a constant back and forth between court transcripts and methodological standards (e.g. Drisko & Maschi, 2015; Krippendorff, 2019; Neuendorf, 2017; Riffe et al., 2014; White & Marsh, 2006). On the one hand, design features mentioned in the methodological literature had to be assessed against the full judgment transcripts. To illustrate, procedural standards allow for both human- and computer coding. However, whether human

or computer-aided coding would be the better choice was ultimately dependent on the transcripts' structure, requiring an initial assessment of texts (e.g. Krippendorff, 2019; Neuendorf, 2017). On the other hand, the unstructured information in court transcripts led to unforeseen procedural issues, making it necessary to go back to the methodological guidelines. For instance, a preliminary screening of court transcripts revealed that texts, although relevant as regards subject matter, can cover distorted information. The separation of relevant from irrelevant text segments required the development of additional procedural steps following the content analysis literature. The iterative process between methodological standards and court transcripts has shaped the content analysis design of this thesis.

The content analysis design consists of *unitising*, *reliability, sampling,* and *coding*. Figure 4 illustrates the content analysis design of this enquiry. First, *unitising* is separating relevant text segments from irrelevant parts. The unitisation process used in this content analysis has been specifically designed for the unstructured nature of court transcripts. Second, the *reliability* of the unitising process is addressed. In this content analysis, Guetzkow U was calculated to assess the reliability of the unitising procedure. Third, the *sampling plan* of selecting full judgment transcripts was a multistage process. Sample 1 comprises text segments found in full judgment transcripts outlining the properties of money laundering. Sample 2 entails the previously identified text segments grouped to represent episodes of money laundering incidents. Fourth, *code* sets were developed deductively and inductively based on theory and data and applied to text segments in both samples. Coding 1 entails manually applying measurements to those text segments covered in sample 1. Coding 2 constitutes applying measures to paired text in sample 2. Here, the codes are refined measures as a

consequence of the data analysis of sample 1. The following sections outline the individual design parts in more detail.

Figure 4

Content Analysis Design

```
                                    ┌──────────┐      ┌──────────┐
                                    │ Sample 1 │─────▶│ Coding 1 │
                                    └──────────┘      └──────────┘
┌───────────┐      ┌─────────────┐ ▲                        ┊
│ Unitising │────▶ │ Reliability │─┤                        ┊
└───────────┘      └─────────────┘ ▼                        ▼
                                    ┌──────────┐      ┌──────────┐
                                    │ Sample 2 │─────▶│ Coding 2 │
                                    └──────────┘      └──────────┘
```
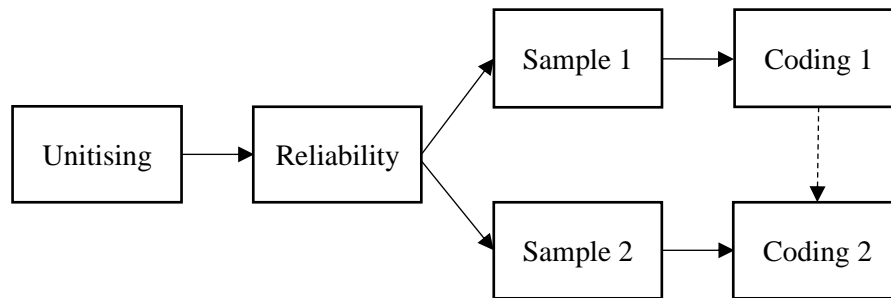
3.4 Unitising

This section outlines the unitising of full judgment transcripts. Up to this point, quantitative content analysis has been summed up as the assigning of numerical values to features of human communication. It is, however, rare to allocate numbers to message characteristics immediately. Instead, a considerable amount of work goes into identifying those parts of human communication that match the unit of analysis (Däubler et al., 2012; Krippendorff, 2019; Schmierbach, 2009; White & Marsh, 2006). Consequently, the allocation of numerical values to text features in content analysis is preceded by separating the relevant from the irrelevant aspects of human communication.

Unitising is to define the unit of analysis in human communication. To that end, researchers systematically identify and separate the relevant from irrelevant message components (Däubler et al., 2012; Drisko & Maschi, 2015; Krippendorff, 2019; Neuendorf, 2017; Schmierbach, 2009; White & Marsh, 2006). However, finding the unit of analysis in

human communication generally depends on many factors. To illustrate, Neuendorf, Gore, Dalessandro, Janstova, and Snyder-Suhy (2010) performed a content analysis on 20 James Bond movies to assess the portrayal of women. In doing so, the authors had to distinguish 195 female roles from their male counterparts based on sex, age, dialogue, and screen time. Krippendorff (2019) sees the researcher's ability, research purpose, and employed data analysis techniques as determining factors of the unitising process:

> This act [unitising] crucially depends on the analyst's ability to see meaningful conceptual breaks in the continuity of his or her reading experiences, on the purposes of the chosen research project, and on the demands made by the analytical techniques available to date. (Krippendorff, 2019, p. 103)

Defining the unit of analysis in human communication is thus a variable process that depends on the specific needs of the individual study.

There are no standard procedures for the unitisation of court transcripts. The methodological literature for content analysis generally comprises little guidance on how to unitise human communication. Unsurprisingly, there has been no standard approach for unitising court transcripts (e.g. Däubler et al., 2012; Drisko & Maschi, 2015; Krippendorff, 2019; Neuendorf, 2017; Riffe et al., 2014; White & Marsh, 2006). Furthermore, though empirical research on money laundering has used agency records like criminal files and suspicious activity reports before (Irwin et al., 2012; van Duyne, 2003; van Duyne & Levi, 2005), none has reported how the documents were processed, let alone unitised. In the absence of standard procedures for court transcripts, the decision was made to develop a new unitising procedure for this enquiry.

The methodological literature offers a multitude of approaches to unitisation. Developing an approach to unitising court transcripts was challenging due to the numerous procedure that exists next to each other. For example, Krippendorff (2019, pp. 107–112), differentiates five ways to define the unit of analysis, namely the physical, syntactical, categorial, propositional, and thematic distinctions. Moreover, Neuendorf (2017, pp. 71–72) refers to etic and emic unitisation, roughly understood as units that are predefined and those emerging during the analysis, respectively. Lastly, Riffe et al. (2014, pp. 57–59) distinguish between physical and meaning units of messages to locate the unit of analysis in content. The numerous unitising procedures further complicated the development of a procedure tailored to full judgment transcripts.

Two unitisation procedures were initially considered for the court transcripts. Däubler et al.'s (2012) research note on analysing political texts has been the point of departure for developing a unitising procedure for this thesis. In the paper, relevant text was defined exogenously and endogenously:

Unitization can be specified exogenously to the research process using no human judgement, on the basis of predefined rules. This defines units of text in a manner independent of any coding decisions made as part of the analysis. Examples of such rules include using words, word sequences or n-grams, natural sentences, paragraphs, pages or even entire documents as the unit of analysis. Alternatively, text units may be defined endogenously to the coding process and involve human judgement, as part of the content analysis itself, to determine where one unit of content ends and another begins. (Däubler et al., 2012, p. 938)

The reasons for choosing the exogenous-endogenous distinction as a starting point for developing a unitising procedure were twofold: First, the distinction aims at textual units of analysis. In particular, the research note focuses exclusively on the unitisation of political manifestos, which, like full judgement transcripts, come in textual form. Second, the approach to unitising originates from discussions about unstructured political texts that require careful examination. Similar to full judgment transcripts, where it is in the judge's discretion to mention relevant facts when reading the verdict, it depends on the author of political texts on how to present political ideas and issues. For the above reasons, the exogenous-endogenous distinction was considered an ideal starting point for developing a unitising procedure for court transcripts.

An initial screening of transcripts informed the unitising procedure of this thesis. A set of 200 full-judgment transcripts, including the word "money laundering", was accessed online via Casetrack and assessed. The assessment focused on whether information on money laundering was grouped around specific textual components like words, word sequences or n-grams, natural sentences, and paragraphs, suggesting an exogenous approach to unitisation. In comparison, if the information on money laundering is unevenly presented in court records, an endogenous approach to unitising text would be more appropriate. Accordingly, the unitising procedure of this thesis was based on the unique structure of court transcripts.

The unstructured transcripts did not suggest an exogenous approach to unitising. Four features of court transcripts could undermine the exogenous identification of the textual units of analysis. First, the *document size* varied substantially across the full judgment transcripts. For example, R v Austin (2013) included 12,765 words. In contrast, the transcript of R v Brown (2006) consisted of just 928 words. Second, the *number of words* used to describe money

laundering incidents changed from text to text. In R v Gibson (2014), the judge used approximately 380 words to summarise a single money laundering offence. By way of comparison, in R v Radford (2013), a money laundering offence was summarised in 15 words. Third, the *number of money laundering incidents* outlined in court transcripts ranged from none to multiple accounts. For example, the judge in R v Butler (2016) only mentioned the crime when referring to the guideline on fraud, bribery and money laundering offences. On the other hand, R v Ahmet and Akam (2006) outlined seven counts of money laundering. Fourth, the *location of text segments* about money laundering offences was unevenly distributed across court transcripts. Some documents covered relevant facts of the offence in the early paragraphs, others towards the end of the text. Equally important, information about a single money laundering incident could be spread across the document. In R v Osborne (2016), for instance, some 200 words of irrelevant text separated information about the money laundering offence and the origin of the illegal proceeds. There was no indication that an exogenous approach to unitising would allow for selecting those textual parts required for this thesis.

Even an endogenous approach to unitising court records was not readily applicable. Mainly, how judges talked about money laundering during trials could make it challenging to select relevant text segments endogenously. First, court transcripts outlined money laundering incidents on different *levels of analysis*. When reading the verdict, judges could give a macro-level depiction of two or more money laundering incidents of the same kind. A macro-level description can be found in R v Clark (2015), where the judge described money laundering in the following manner: "Between 27th March 2012 and 5th May 2012, £1,033,500 was deposited and transferred abroad" (R v Clark, 2015). In comparison, judges provided micro-level accounts for single offences taking place at one point in time. To illustrate, in R v Ahmet and Akam (2006), the judge outlined the money laundering offence in the following manner:

Malik attempted to get Ali and Ersen Ahmet to stay at the premises in the hope that they could take £200,000 or £300,000 rather than the sum which was ready to go, which was just short of £100,000. However, they did not stay but left the flat on the next day, 30th March. They got into a Saab vehicle and Ali Ahmet was seen to place a black holdall, which in the event contained almost £100,000, into the car. They then drove to a hotel on the Seven Sisters Road in London. Ali Ahmed removed the holdall and took it into the hotel. (R v Ahmet and Akam, 2006)

The macro-level accounts combined multiple deposits and transfers taking place over a month, while the micro-level accounts outlined relevant steps of a single cash transport that happened over days. Second, court transcripts sometimes outline *ongoing and planned money laundering offences*. For one thing, information about ongoing money laundering offences covers those cases whose execution was disrupted. To illustrate, R v Bowler-Degan (2014) covers a cash transport that got stopped by the police: "On 18 September 2010, the police stopped an Astra vehicle near Bedford. That was being driven by a co-accused. Cash in the sum of £98,580 was found in the Astra and was seized". In contrast, information about planned money laundering covers future but not executed activities. For example, R v Basra (2002) involved a case in which the accused was about to fly to the Netherlands but got stopped before boarding the plane:

On one particular occasion, 21st April 1998, Customs and Excise officers had been observing him. He was arrested at Heathrow Airport about to board a flight for Holland. In his possession were 388,925 Dutch Guilders which he had purchased earlier from the Bureau for £117,146. (R v Basra, 2002)

Both ongoing and planned money laundering activities represented a challenge for unitising texts endogenously. Third, verdicts can change essential facts. The Court of Appeal reviews judgments and orders of the lower High Courts and most county courts (Law, 2018). The Administrative Court, on the other hand, assesses and decides whether the law has been followed by public bodies (Public Law Project, 2018, p. 2). The decisions made at the Court of Appeal and Administrative Courts can thus potentially change and overturn decisions made at lower courts. The screening of the full judgment transcriptions did not show any case where the final verdict changed essential facts about offences. However, there was a realistic chance that this might be the case in other transcriptions. The unique way judges described money laundering in court represented a challenge for unitising text components endogenously.

In this content analysis, court transcripts were unitised endogenously. Neither exogenous nor endogenous approaches were ideal for locating those textual components containing facts about money laundering. Indeed, an exogenous approach to unitisation would be highly replicable. However, facts about money laundering were spread randomly in court transcripts, which were likely to produce textual units of analysis without any analytical value. On the other hand, an endogenous approach to unitising would allow to hand-pick only the textual parts, where judges inform on money laundering in a manner that allows for comparisons. Nevertheless, endogenous approaches rely entirely on human decision-making. The decision was made to unitise court transcripts endogenously, ensuring that only relevant text units were selected for the analysis.

Endogenous unitisation entailed dividing court transcripts into quasi-sentences. The idea was adopted from the Comparative Manifesto Project (Werner et al., 2015), where texts

are split into parts containing policy statements, namely quasi-sentences. Here, the coding manual of the Comparative Manifesto Project defines quasi-sentences as follows:

> One quasi-sentence contains exactly one statement or 'message'. In many cases, parties make one statement per sentence, which results in one quasi-sentence equalling one full sentence.... Only if the natural sentence contains more than one unique argument should this sentence be split. (Werner et al., 2015, p. 6)

Analogous to the Comparative Manifesto Project, this thesis' textual units of analysis are natural sentences that hold unique information about money laundering incidents. However, the nature of court transcripts required further specifications to exclude relevant from irrelevant content. Natural sentences or their parts were considered quasi-sentences if they met four requirements, as illustrated in Figure 5. First, a natural sentence informs about a *unique feature* of the money laundering offence, like actions, offenders, volume and type of criminal proceeds. Second, natural sentences must concern *micro-level descriptions* of money laundering incidents. Irrelevant to the analysis were macro-level portrayals entailing multiple money laundering incidents at once, which do not consider the specific configuration of the criminal event. Third, natural sentences should refer to *completed or ongoing* money laundering offences. Planned but not carried out money laundering activities did not qualify for examination. Fourth, facts presented in natural sentences remain *unchanged after the verdict*. If parts of the money laundering offence were deemed untrue during the verdict, the accounts were not considered for this content analysis. Natural sentences meeting all four requirements were eligible for the present content analysis. If a natural sentence contained more than one unique piece of information on money laundering, the text segment was cut into meaningful textual units, which were indicated by commas or semicolons.

Figure 5

Unitisation Process

```
                    ┌─────────────────────────────────┐
                    │ Natural sentence holds unique   │
                    │ info about money laundering     │
                    │ incident?                       │
                    └─────────────────────────────────┘
                         │                    │
                      ( Yes )              ( No )
                         │                    │
                         ▼                    ▼
        ┌──────────────────────────┐   ┌──────────────────┐
        │ Natural sentence informs │   │ Exclude from     │
        │ about a money laundering │   │ analysis         │
        │ offence on the           │   └──────────────────┘
        │ micro-level?             │──( No )──▶
        └──────────────────────────┘
                    │
                 ( Yes )
                    │
                    ▼
        ┌──────────────────────────┐   ┌──────────────────┐
        │ Natural sentence informs │   │ Exclude from     │
        │ about an ongoing or      │──( No )──▶│ analysis  │
        │ completed money          │   └──────────────────┘
        │ laundering incident?     │
        └──────────────────────────┘
                    │
                 ( Yes )
                    │
                    ▼
        ┌──────────────────────────┐   ┌──────────────────┐
        │ Natural sentence reports │   │ Exclude from     │
        │ facts that are still     │──( No )──▶│ analysis  │
        │ intact after the verdict?│   └──────────────────┘
        └──────────────────────────┘
                    │
                 ( Yes )
                    │
                    ▼
        ┌──────────────────────────┐
        │   Eligible for analysis  │
        └──────────────────────────┘
```

3.5 Reliability

The following pages outline the replicability test used in this content analysis. Reliability in content analysis entails, very broadly, demonstrating that repeated manual unitising and coding yields similar results (Krippendorff, 2019; Lacy et al., 2015; Neuendorf, 2017; Pavitt, 2018; Potter & Levine-Donnerstein, 1999). Human decisions can hurt the reliability of a study in many ways. For example, Neuendorf (2017) lists four threats to reliability when assigning codes to texts:

> [1] A poorly executed coding scheme: This could mean a poorly worded set of instructions in a codebook, the failure of the researcher to make changes in the coding scheme after a pilot test, or both…. [2] Inadequate coder training: As outlined in Chapter 5, coder training typically involves several sessions and practice coding to establish good initial reliability for the pilot test…. [3] Coder fatigue and coder drift: Coder performance may be impacted either short-term or long-term by fatigue brought about by an over-long codebook or a very long or intensive coding schedule….[4] The presence of a rogue coder: Although rarely encountered, there is always the possibility of the appearance of a coder who simply cannot— or will not—be trained to achieve reliability. (Neuendorf, 2017, p. 170)

Reliability in content analyses means that manual unitising and coding are coherent across settings.

To date, there has been a lack of widely accepted reliability standards applied to content analysis. Numerous reliability measures were used for content analyses. For example, Lombard et al. (2002) reviewed the reliability measures of 200 studies and identified seven approaches. In addition, most reliability coefficients are produced for coding, not unitising. Coding and

unitising are equally susceptible to reliability issues. Nevertheless, hardly any reliability measures were available in the methodological literature (Krippendorff, 2019; Neuendorf, 2017; Pavitt, 2018). Finally, there are poor reporting standards for methods, affecting general reliability. For instance, Lovejoy et al. (2014) assessed the reporting of reliability in 581 content analyses and found a lack of detail for sampling methods and measurements. Generally recognised reliability standards have been missing in the methodological literature.

The reliability checks in this content analysis have two features: First, *intracoder* reliability has been tested. Reliability tests measure the consistency of individual and multiple researchers' uniting- and coding processes. Lacy et al. (2015)(2015, p. 796) distinguish between intracoder and intercoder reliability. The former refers to a single coder's consistency across time. The latter comprises the consistency across multiple coders. In this content analysis, the unitising and coding of court transcripts were performed by a single coder. Accordingly, only intracoder reliability could be measured. Second, reliability checks have been performed exclusively for the unitisation process. The reason for this lies in the exploratory nature of this study. The code development has been an iterative process, where predefined codes are applied to court transcripts and then refined based on the discovered information in data. Simply put, the initial code set changed over time, making it impossible to measure intracoder reliability for codes. For the above reasons, the intracoder reliability in this content analysis was only measured for the unitising process.

Guetzkow's U was used to determine the reliability of unitisation procedure. In content analysis literature, Guetzkow's U represents the current standard to measure reliability of the unitising process (Krippendorff, 2019; Neuendorf, 2017; Pavitt, 2018). Guetzkow (1950) saw the number of units obtained from coders as basis for evaluating the unitising reliability. For

Guetzkow U, the difference in the number of units for point A and B is divided by the total number of units identified in A and B. Simply put, Guetzkow U captures if the coder has selected the same number of units across multiple points in time. Guetzkow U of this content analysis was calculated for the unitising processes from 2018 and 2020. The 2018 dataset was created for the examination to fulfil the academic requirements of University College London to upgrade from MPhil a to PhD degree. The final dataset was created in 2020 and is the basis of this doctoral thesis. The Guetzkow U for this content analysis was at 97.12 percent, indicating high unitising reliability.

3.6 Sampling

This section outlines the sampling plan for quasi-sentences contained in court transcripts. The unstructured nature of human communication poses various challenges for the sampling in a content analysis. Krippendorff (2019, pp. 116–117) gives four reasons why standard sampling procedures do not automatically apply to texts:

1. Texts have no natural boundaries. In social sciences, samples often cover participants or subjects, which are inseparable and independent. Texts, on the other hand, can be unitised in multiple ways, making it less clear-cut what to include into the analysis.

2. Texts do not automatically count. Sample size refers to the number of participants or subjects included for analyses (Acheson, 2010, p. 1300). In content analysis, if texts were unitised, only those text segments relevant to the study are counted, not the texts themselves.

3. Texts are not equally informative. Drawing a sample assumes that all participants or subjects are equally informative. By way of comparison, texts are not created for

scientific purposes and because of that, relevant information is often unevenly distributed among documents.

4. Texts stand for multiple populations. Standard sampling aims to represent the properties of a single population. In comparison, sampling in content analysis must consider at least two populations simultaneously. The population of text fragments relevant to the research objective and the population of texts containing those segments, since not every text is equally informative (Krippendorff, 2019, pp. 116–117).

The extent to which these limitations must be considered for the sampling procedure ultimately depends on the structure of human communication.

Sampling court transcripts entailed similar challenges. The full judgment transcripts accessed through the online archive Casetrack covered over 80,000 documents related to all sorts of criminal offences. Not all court records were concerned with money laundering offences. Moreover, even if court transcripts were related to a money laundering offence, texts were not equally informative. Some documents could contain numerous quasi-sentences, others entailed none. All these text features affected the sampling court transcripts.

In this content analysis, sampling has been a multistage process. The first step entailed the *preselection* of full judgment transcripts. The aim was to identify those records related to money laundering offences. To that end, a full-text search of over 80,000 documents was conducted in the online archive Casetrack. Figure 6 shows the user interface of Casetrack. The search term "money laundering" was used to find the documents mentioning the word at least once. Moreover, the search was limited to the Court of Appeal and Administrative Court of England and Wales. The results suggested that the Court of Appeal and Administrative Court cover significantly more transcripts that mention money laundering. Furthermore, decisions

from lower courts of Scotland, Ireland, England, and Wales can be altered by higher courts and so were deemed less credible.

Figure 6

User Interface of Casetrack

The second step involved the *full-text assessment* of court records. Here, the full-text assessment aimed at those files identified during preselection. The full-text assessment was necessary since transcripts could hold the term money laundering without containing relevant quasi-sentences. As mentioned before, judges may refer to an earlier money laundering conviction of the defendant or anti-money laundering legislation while reading the verdict. Moreover, even if judges refer to money laundering offences, the provided information may not qualify as a quasi-sentence. Consequently, court records needed to contain at least one quasi-sentence to be included in the sample. Court transcripts that did not contain at least one quasi-sentences were excluded from the content analysis.

Next, two purposive samples were drawn based on preselection and full-text assessment. The individual samples allowed for a different kind of analysis. Sample 1 was

created to enable the identification of money laundering properties in text. Sample 2 was drawn to compare money laundering incidents and their properties. In this way, samples 1 and 2 contribute differently to the primary objective goal of this thesis to understand how money laundering works. The details of both purposive samples are outlined below.

3.6.1 Sample 1

Sample 1 was created to analyse and conceptualise the properties of money laundering, consisting of 1,364 quasi-sentences holding information about various characteristics of the offence. The preselection was conducted in February 2017, resulting in 500 full judgment transcripts for the query using the search term "money laundering". The subsequent full-text assessment of the 500 preselected full judgment transcripts was performed to identify quasi-sentences in court transcripts. As outlined in section 3.4, natural sentences had to meet four requirements to qualify as quasi-sentences. The final full-text screening of the 500 court files was conducted in August 2020 and resulted in 1,364 quasi-sentences from 180 full judgment transcripts (1997-2017) from the Court of Appeal and Administrative Court of England and Wales. Of the 500 court documents, 320 texts were not considered for this content analysis because they did not hold a single quasi-sentence and only mentioned the term money laundering. The complete list of full judgment transcripts included in sample 1 can be found in Appendix V.

3.6.2 Sample 2

Sample 2 comprised information about 305 money laundering incidents. Unstructured textual information does not have natural boundaries, and the unit of analysis is not straightforward

(Krippendorff, 2019, pp. 116–117). The same was true for full judgment transcripts. The quasi-sentences had to be organised in a way that enabled the exploration of money laundering incidents. Two features of the full judgment transcripts made data transformation necessary. First, full judgment transcripts could entail quasi-sentences related to multiple counts of money laundering separate from each other. It was possible to find references to unrelated money laundering incidents, offenders, times, and places in court transcripts. For example, the court document for R v Baker (Andrew) (2014) held quasi-sentences providing information about two separate money laundering incidents, entailing a property purchase in Turkey for £94,000 and the storage of £25,000 in cash found in a gun cupboard in a United Kingdom home. Second, full judgment transcripts could entail quasi-sentences informing about the different money laundering incidents at once. To illustrate, in R v Baker (Andrew) (2014), the judge informed that the predicate offences related to all the mentioned money laundering incidents were a series of fraudulent invoices filed over 13 years. The unstructured nature of full judgment transcripts, therefore, made it necessary to transform data in a manner that links related quasi-sentences in a meaningful manner.

Quasi-sentences were grouped as money laundering incidents. In this thesis, *money laundering incidents* are defined as single episodes of handling monetary and non-monetary criminal assets, comprising properties from the crime event and its immediate environment. Hence it was crucial to bring together quasi-sentences that inform about the same money laundering incident to enable an investigation of how the crime works. To that end, the criminal proceeds were the natural anchors for identifying money laundering incidents in the text. From a legal perspective, money laundering always entails criminal assets. In courts in England and Wales, the Crown Prosecution Services (2018) has to prove that the proceeds in question come

from criminal activity. The criminal asset, therefore, functioned as the focal point to organise quasi-sentences that held information about the same money laundering incident.

To group quasi-sentences informing about the same money laundering incident, the software application *NVivo 12* was used. NVivo 12 allows its users to sort textual information by case. The case function effectively acts as a container that holds information related to an individual unit of analysis (QSR International, 2020). For the data transformation, text segments were paired via drag-and-drop into a case folder that combines all quasi-sentences related to individual money laundering incidents. Figure 7 illustrates the pairing of quasi-sentences in NVivo 12 data transformation process for pairing quasi-sentences related to specific money laundering incidents. The randomly dispersed pieces of information from the full judgment transcript are brought together in the case folder. Once this step is completed, the case folder holds all the relevant information about a single money laundering incident.

Figure 7

Pairing of Quasi-Sentences in NVivo 12
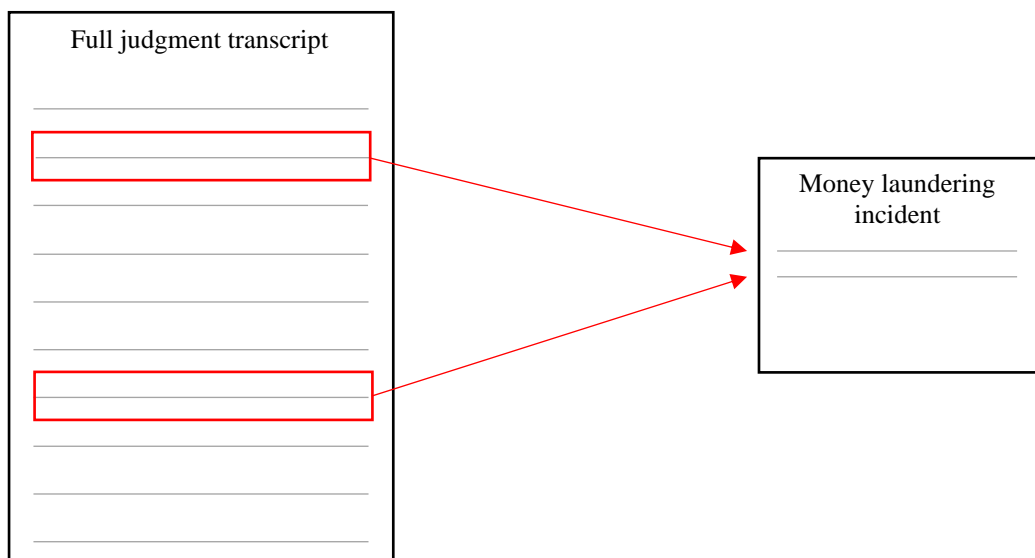
3.7 Codes and Coding

Codes for sample 1 and sample 2 were created using a deductive-inductive approach to code development. *Codes* are labels assigned to text pieces that hold a specific idea or information (L. Cohen et al., 2011; DeCuir-Gunby et al., 2011). In content analysis, codes fulfil the function of measurements. Neuendorf (2017), for example, compares the development of codes to the operationalisation in surveys and experiments:

> Operationalization is the process of developing measures. It's 'the construction of actual, concrete measurement techniques' (Babbie, 1995, p. 5). For content analysis, this means the construction of a coding scheme…. Many of the guidelines for good operationalization in survey and experimental research apply directly to measurement in content analysis as well. (Neuendorf, 2017, p. 131)

Creating specific codes is hence about specifying the measurements applied to the textual units of analysis.

Labels, however, must first qualify as codes. Various requirements have been specified in the content analysis literature that labels must meet to enable valid and replicable inferences. Key requirements typically entail exhaustiveness and mutual exclusiveness (Däubler et al., 2012; Drisko & Maschi, 2015; Krippendorff, 2019; Neuendorf, 2017; Riffe et al., 2014; Scott, 1990). Krippendorff (2019) defines exhaustive and mutual exclusive codes in the following manner:

> *Exhaustive* refers to the ability of a data language to represent all recording units, without exception. No relevant unit of analysis must be excluded because descriptive terms are not available. *Mutually exclusive* refers to the ability of a data language to make clear distinctions among the phenomena to be recorded. No recording unit may

fall between two categories or be represented by two distinct data points. These two requirements assure that the resulting records represent texts completely and unambiguously. (Krippendorff, 2019, p. 138)

Codes in content analysis, hence, cannot simply be chosen freely. Instead, code development entails only labels that are exhaustive and mutually exclusive.

There are two main approaches to code development. First, codes can be created deductively. While doing so, codes follow established theories and are defined prior to the content analysis. Another approach is to create codes inductively. Here, the code-making takes place during the content analysis. Code emerges from the data without prior information to guide their development (Campbell et al., 2013; DeCuir-Gunby et al., 2011; Drisko & Maschi, 2015; Hsieh & Shannon, 2009; Miles et al., 2018; Neuendorf, 2017; Potter & Levine-Donnerstein, 1999; Srnka & Koeszegi, 2007). Depending on the available theories and data, the deductive or inductive approach to code development may be more appropriate to ensure exhaustiveness and mutual exclusivity.

Nonetheless, code development is an ongoing process. Regardless of the approach to code development, codes may change over the course of a study. For instance, Miles et al. (2018) highlight the evolving nature of coding notes of field studies:

For all approaches to coding, several codes will change and evolve as field experience continues. Researchers with start lists know that codes will change; there is more going on out there than our initial frames have dreamed of, and few field researchers are foolish enough to avoid looking for these things. (Miles et al., 2018, p. 75).

Any revisions to codes in an enquiry need to be made explicit and justified in order to maintain exhaustiveness and mutual exclusivity.

For this content analysis, a hybrid approach to code development was chosen. The methodological literature on content analysis has highlighted the possibility of combining deductive and inductive approaches to code development. Broadly speaking, such hybrids are thought to make up for shortcomings of the individual approach (Drisko & Maschi, 2015; Fereday & Muir-Cochrane, 2006; Srnka & Koeszegi, 2007). For example, Srnka & Koeszegi (2007) describe the advantage of using hybrid approaches as follows:

> In developing the category scheme, the criterion of reliability would induce analysts to promote 'standard categories' (derived from theory) that could be repeatedly used. The criterion of validity, on the other hand, suggests the (inductive) development of original systems that capture the essence of the phenomenon (Druckman and Hopmann (2002)). We suggest a deductive-inductive procedure, because it combines the advantages of both approaches. (Srnka & Koeszegi, 2007, p. 37)

The deductive-inductive approach to code development was considered the best alternative for this content analysis to create exhaustive and mutually exclusive codes.

The rationale for choosing a hybrid approach to code development was twofold. First, it was doubtful that the three-stage model and related concepts would make it possible to measure all information in court transcripts. This scepticism was based on the few existing empirical studies on the three-stage model, which already show that various aspects of the money laundering process are conceptually not fully captured. Consequently, deductive codes were considered a practical starting point but inherently incomplete. Second, inductive code development was believed to counterbalance the conceptual deficits in money laundering research and allow the measure and incorporation of unknown aspects of the crime into the

analysis. The mix of deductive and inductive approaches to code development was regarded as the best way to ensure code exhaustiveness and mutual exclusivity.

The content analysis at hand entailed multiple rounds of coding. Measuring all relevant aspects of textual information in the first attempt is uncommon. More often than not, the exploratory nature of coding requires refining the understanding of the social phenomenon under investigation. For example, Saldaña (2021, p. 12) sees coding as a multi-stage process:

> Coding is a cyclical act. Rarely is the first pass or first cycle of coding data perfectly attempted. The second cycle (and possibly the third and fourth, etc.) of recoding further manages, filters, highlights, and focuses the salient features of the qualitative data record for generating categories, themes, and concepts, grasping meaning, and/or building theory. (Saldaña, 2021, p. 12)

Likewise, there were multiple rounds of coding in this content analysis. In the first coding round, the deductively and inductively created codes were applied to the quasi-sentences in sample 1. The final code set for sample 1 entailed 13 codes and allowed for exhaustive and mutually exclusive coding. The second round of coding entailed an inductively created code set. The initial code set was refined as a consequence of the analysis of sample 1, allowing money laundering to be measured more accurately. The two rounds of coding, hereinafter referred to as coding 1 and 2, are described in detail below.

3.7.1 Coding 1

The codes for quasi-sentences in sample 1 were developed deductively and inductively. Figure 8 illustrates each step of the deductive-inductive procedure to code development. First, codes were created deductively based on fundamental concepts found in money laundering research.

Next, the initial code set was tested on quasi-sentences found in randomly selected court transcripts holding the word "money laundering". While doing so, the test coding showed that the preliminary codes did not apply to many quasi-sentences. Consequently, the preliminary code set lacked the required exhaustiveness. Therefore, the decision was made using inductive codes to complement the deductive code set. Next, the revised code set was tested against previously identified quasi-sentences and then finalised.

Figure 8

Deductive-Inductive Code Development Procedure
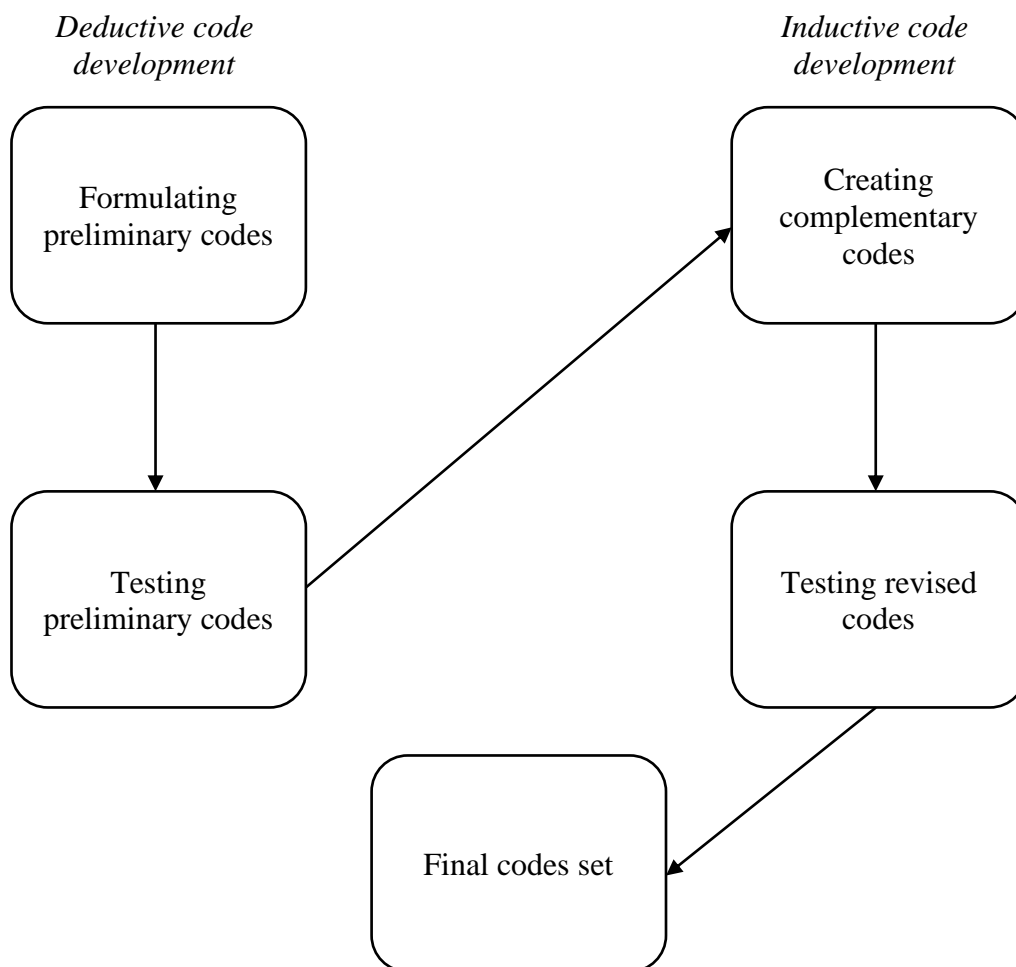
The final code set for sample I entailed 13 codes. Appendix VI shows the code set applied to sample 1, including code labels, definitions, code development approach, and source for each measurement in the final code set. In the case of deductively generated codes, definitions originated from the academic literature. For example, the code *export* was created based on empirical work done by Petrunov (2011), van Duyne (2003), and van Duyne and Levi (2005), who observed that criminals do remove illegal proceeds from the country of origin. By way of comparison, the inductively developed codes emerged directly from full judgment transcripts. For example, code *storage*, which refers to offenders stockpiling criminal proceeds for future use, was created after numerous judges in court transcripts had reported incidents where offenders hoarded cash or left money sitting in bank accounts. In total, the final code set entailed eight codes from the academic literature and four codes that emerged from court transcripts. In line with methodological standards, the final code set also included a code labelled *No Code Applies* (Krippendorff, 2019, p. 139). The code was created as a fail-safe measure to ensure the exhaustiveness of the code set and allows to account for all text segments that do not fit into the other categories.

There are two procedures to assign codes to texts. The content analysis literature distinguishes between *human* and *computer coding*.[1] The former entails researchers assigning codes to text segments manually following written coding instructions. The latter means that computer programmes automatically allocate codes to text based on predefined dictionaries that associate words and phrases with the given codes (Alonso et al., 2012; Conway, 2006; Krippendorff, 2019; Neuendorf, 2017; Weber, 1990; Zamith & Lewis, 2015). Human and

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[1] In content analysis, the process of assigning codes to raw textual data is called *coding* (DeCuir-Gunby et al., 2011; Guetzkow, 1950; Krippendorff, 2019; Neuendorf, 2017; Srnka & Koeszegi, 2007).

computer coding have different strengths and limitations that must be considered when choosing a procedure.

Human coding was used to allocate codes in this content analysis. Using manual over automated procedures, though often seen as less replicable than computational methods, was deemed more precise and practical (Alonso et al., 2012; Conway, 2006; de Graaf & van der Vossen, 2013; Grimmer & Stewart, 2013; Lacy et al., 2015; Lewis et al., 2013; Mikhaylov et al., 2012). Human coding enables a more precise measurement of money laundering characteristics in text. For example, Conway (2006), compared the results of human and computer-assisted coding and found that the former returned more nuanced results than the latter. In addition, human coding was deemed more practical. De Graaf and van der Vossen (2013) and Zamith and Lewis (2015) argued that, when preparing automated procedures, various additional steps are required that can diminish any efficiency gains. With no prior experience in using automated methods, this was a realistic scenario for this content analysis. Manual coding procedures were therefore deemed more precise and practical to assign codes to quasi-sentences in this content analysis.

3.7.2 Coding 2

This subsection details the second round of coding for sample 2. The second coding round measured the paired quasi-sentences in sample 2, representing the money laundering incidents. Codes were created inductively and stand for subcategories of the initial code set created for and applied to the quasi-sentences in sample 1. Subcategories are commonly created in qualitative research for data requiring further specification (Dey, 1993; Miles et al., 2018; Saldaña, 2021). Most importantly, subcategories can aid the analysis by adding conceptually

relevant characteristics that would remain otherwise hidden in the data. To illustrate, Dey (1993) described the benefits of splitting codes into subcodes as follows:

> There is virtually no limit, therefore, to the subcategories we could create for analysing the data. However, we need only note those differences which are conceptually relevant and practically useful from the point of view of further analysis. Subcategorizing can let you see differences which would otherwise remain buried or blurred; but too many distinctions can lead to unnecessary fragmentation and loss of focus. (Dey, 1993, p. 145)

From this viewpoint, only those codes should be split into subcodes for which further specification would be empirically and conceptually justifiable.

In this content analysis, the relevance of subcategories was ensured in two ways. First, subcodes were created inductively, ensuring their empirical relevance. Subcodes emerged from the data analyses in chapters four and five. In simple terms, recurring words were identified and examined to see if they represent meaningful subcategories. For instance, quasi-sentences coded as predicate offences contained repeated references to the distinct classes of criminal offences prior to money laundering, such as drug trafficking and fraud. The inductively developed subcodes were a refined and more detailed version of the broader code set applied to quasi-sentences in sample 1. Second, subcodes were evaluated against the analytical framework to ensure their conceptual relevance. All empirical analyses were embedded in a conceptual framework to make the suspected mechanisms explicit. Potential keywords that could not be integrated into the conceptual framework were not further processed. For instance, quasi-sentences contained basic information about the temporal dimension of money laundering by referencing the month and year of the offence. From the conceptual perspective,

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however, the underlying mechanisms between timing and money laundering incident could not be specified conceptually. As such, month and year were not considered subcategories. Splitting codes into parts was deemed warranted where the empirical and conceptual relevance of subcodes could be demonstrated.

The revised code set consisted of 84 codes. Appendix VII shows the list of 84 measurements used for coding sample 2. The codes allowed for a more refined measurement of the previously analysed quasi-sentences. The codes included both categorical and continuous variables. The values for categorical variables were dummy coded. Moreover, the continuous variables were directly taken from the text. Importantly, the information was recorded in Microsoft Excel to enable statistical analyses. Moving from NVivo 12 to Microsoft Excel was a decision based on NVivo's function as a tool for qualitative analysis, allowing only for rudimentary statistical analysis. To avoid limitations in terms of data analysis at a later point in the research project, the decision was made to manually record the codes and related subcodes in Microsoft Excel based on the NVivo 12 records. Moving from Nvivo 12 to Excel enabled the application of more complex data analysis methods, which are outlined in the next section.

3.8 Data analysis

The last section outlines the data analysis procedure for this study on money laundering. The analytical strategy of this thesis is explained, comprising elements from qualitative and quantitative research. In particular, the analytical strategy to explore data on money laundering included a combination of within-case and cross-case analyses. Moreover, the data analysis methods for the within-case and cross-case analyses were code and word frequencies and

cluster analysis. Together, the analytical strategy and data analysis methods enabled exploring how money laundering works.

3.8.1 Analytical Strategy

Choosing a suitable analytical strategy for this enquiry has been a challenging task. The weak scientific basis of money laundering research and the unstructured nature of full judgment transcripts posed many challenges to research how money laundering works. For one thing, the scientific literature on money laundering was disjointed and lacked a standard analytical approach. Van Duyne et al. (2018) concluded that money laundering research is conducted separately in different academic disciplines and has yet to advance to the point where established theories, operationalisation, and hypothesis testing are possible. For another thing, no single approach would lend itself to the analysis of text information on money laundering. Rather, the text segments from full judgment transcripts could have been unitised, sampled, and coded in many ways, thereby creating countless possibilities for data analysis. The challenging task was, therefore, to select the best analytical strategy for this thesis from the innumerable possibilities.

The methodological social science literature was consulted in search of the analytical strategy. In the methodological literature, there has been an ongoing debate about the different research traditions in the social sciences. The dividing line often runs between qualitative and quantitative approaches, with conflicting ideas about what makes the respective traditions in social sciences. For instance, King, Keohane and Verba (1994, p. 3) considered qualitative and quantitative approaches as different research techniques that nonetheless share the same underlying logic of inferences. In contrast, Goertz and Mahoney (2012, p. 2) rejected the idea

of a shared logic and regarded qualitative and quantitative research as separate cultures with their own values, research procedures, and communication. Regardless of the particular view, the debate in the methodological literature offered a starting point helpful for designing this thesis' analytical strategy.

This thesis operates at the intersection of qualitative and quantitative research. On the one hand, the thesis can be considered qualitative since it has utilised textual data. Krippendorf (2019, p. 91) argued that the text is always qualitative. With court transcripts as the primary data source, the thesis shows features of qualitative research. On the other hand, the thesis can be regarded as quantitative. A quantitative approach to content analysis was chosen as the data collection method. The approach to content analysis enabled statistical methods to be applied, standing for the quantitative element of this thesis (Drisko & Maschi, 2015; Neuendorf, 2017; Riffe et al., 2014). With qualitative and quantitative elements, this thesis required an adequate analytical strategy that accounts for the different research traditions.

The analytical strategy of this thesis comprises within-case and cross-case analyses. In the methodological literature, the distinction between within-case and cross-case analyses is often described as the key markers that separate qualitative and quantitative research (George & Bennett, 2005; Goertz & Mahoney, 2012; Seawright & Collier, 2012). To illustrate, Goertz and Mahoney (2012) describe the link as follows:

> we see differences in basic orientations to research, such as whether one mainly uses within-case analysis to make inferences about individual cases (as qualitative researchers do) or whether one mainly uses cross-case analysis to make inferences about populations (as quantitative researchers do). (Goertz & Mahoney, 2012, p. 2)

However, within-case and cross-case analyses can complement one another (Ayres et al., 2003; Goertz & Mahoney, 2012; Ragin, 2014). Goertz and Mahoney (2012) outlined the possibility of combining both analytical strategies:

> In fact, best practices in both cultures often point toward research designs that combine the two. On the quantitative side… it is increasingly common for statistical researchers to supplement their work with qualitative case studies… On the side of qualitative research, when a researcher develops a finding for one or a small number of cases, it is natural to ask if the finding applies more generally. (Goertz & Mahoney, 2012, p. 92)

Analogously, the analytical strategy employed in this thesis combines within-case and cross-case analyses. The choice of analytical strategy generally depends on the investigation. For instance, Ayres et al. (2003) discussed the designs of three studies in which within-case and cross-case strategies were mixed to achieve the given research objectives, considering available data and analysis methods. The same applied to the empirical studies conducted in this thesis. Based on the main goal and data of the individual investigations, the analytical strategies are selected accordingly and reported in the individual chapters.

3.8.2 Frequencies and Keywords-In-Context

Frequency counts are an inherent feature of quantitative approaches to content analysis. For advocates of the early content analysis, like Berelson and Lasswell, counting frequencies was central to achieving quantification. Franzosi (2008) cites de Sola Pool (1959), who summarised the state of the art in content analysis research at that time:

> Counting frequencies was the main activity of content analysts in the 1930s and 1940s. Indeed, for many people that is how content analysis was defined. Berelson's book

minus one chapter is almost wholly devoted to such frequency counts. Harold D. Lasswell's content analyses were frequency counts of symbols. (Franzosi, 2008, p. xxi)

For the most part, frequency counts can entail codes and words. Code frequencies entail the number of textual units to which measures have been applied. Word frequencies, on the one hand, count how often specified words appear in the texts. Common to both is the implicit assumption that frequencies allow to identify meaningful deviations from the assumed uniform distributions of codes and words (Berelson, 1971; L. Cohen et al., 2011; Drisko & Maschi, 2015; Krippendorff, 2019; Weber, 1990). In quantitative content analysis, frequency counts are ultimately a tool to make new discoveries in texts.

Frequency counts are vital for the analytical strategy of this thesis for multiple reasons. Code and word frequencies enable the properties of money laundering incidents to be identified in the text. Here, code frequencies were computed to map the type of information expressed in individual quasi-sentences. For instance, many quasi-sentences held information about the predicate offence that underlies the money laundering offence. On the other hand, word frequencies were calculated for quasi-sentences of the same code to find recurring keywords that may indicate vital characteristics. To illustrate, recurring keywords in quasi-sentences informing about the predicate offence could give away the offence class. Together, code and word frequencies are central to this quantitative approach to content analysis to identify relevant information about money laundering in court transcripts.

In addition, a *keyword-in-context* analysis was used complementary to code and word frequencies. Where textual information was ambiguous, a keyword-in-context analysis was conducted to find the meaning of ambiguous terms. The keywords-in-context analysis is a standard feature of content analysis and enables the examination of the specific situation in

which each word appears (Drisko & Maschi, 2015; Krippendorff, 2019; Weber, 1990). The keyword-in-context analysis was a helpful analytical tool to clarify the meaning of ambiguous terms found in court transcripts.

3.8.3 Cluster Analysis

Clustering is a common data analysis technique used in quantitative content analysis. A major advantage of choosing the quantitative approach to content analysis is that it enables the use of any statistical procedures. Selecting a suitable statistical procedure is only depending on the content analysis design and the assumptions underlying the statistical tests. One data analysis method that is repeatedly mentioned in the methodological literature on content analysis is clustering (Drisko & Maschi, 2015; Krippendorff, 2019; Neuendorf, 2017; Riffe et al., 2014). Cluster analysis is a method to identify groups in data (Aldenderfer & Blashfield, 1984; Everitt et al., 2011; Han et al., 2012; Kaufman & Rousseeuw, 2005). Neuendorf (2017) summarises the utility of clustering for quantitative content analyses as follows:

> As suggested above, clustering is popular in content analysis because, unlike factor analysis and multidimensional scaling, it is based on intuitively meaningful similarities among units of analysis, and its resulting hierarchies resemble the conceptualization of text on various levels of abstraction. (Neuendorf, 2017, pp. 213–214)

As a widespread data analysis technique used for quantitative content analysis, clustering was used to explore money laundering practises outlined in court transcripts.

In this exploratory study, clustering was used to identify new money laundering classes. Cluster analysis procedures follow an exploratory logic. For instance, Everitt et al. (2011) see clustering as a method to discover groups in data:

Cluster analysis techniques are concerned with exploring data sets to assess whether or not they can be summarized meaningfully in terms of a relatively small number of groups or clusters of objects or individuals which resemble each other and which are different in some respects from individuals in other clusters. (Everitt et al., 2011, p. 13)

Enabling to identify groups in data, cluster analysis was considered ideal for the present doctoral thesis with its exploratory research approach. The inductive logic of exploratory research to infer trends or patterns from data aligns well with the rationale of cluster analysis to group observations in a meaningful manner. From this perspective, cluster analysis was deemed ideal to explore if the collected court transcripts indicate general trends or patterns of money laundering.

3.9 Conclusion

In this chapter, the scientific methods of this exploratory study on money laundering were outlined. Full judgment transcripts from the Court of Appeal and Administrative Court of England and Wales were selected as the primary data source of this doctoral thesis. Next, a quantitative approach to content analysis was chosen for data collection to describe the content of court transcripts systematically. The quantitative content analysis was specifically designed to process unstructured information about money laundering in court records, including specific procedures for unitising, sampling, and coding of the collected transcripts. Lastly, within-case and cross-case analysis were introduced as the data analysis approach of this study. Here, code and word frequencies as well as clustering were selected as data analysis methods for the information found in court transcripts. In the following chapters, the information from

the court transcripts is explored using the above data analysis procedures to get a better understanding of how money laundering works.

Part II:

Properties

Chapter 4:

Crime Event

Money laundering research covers detailed accounts of so-called *methods, techniques,* and *typologies*[2]. For example, studies have focused on the exploitation of cash, corporate structures and vehicles, legal professionals, and online games for money laundering purposes (He, 2010; Lankhorst & Nelen, 2005; Lord et al., 2018, 2019; Riccardi & Levi, 2018; Riccardi & Savona, 2013; Richet, 2013). However, there are effectively countless ways in which money laundering can occur. The academic literature recognised the many manifestations of the money laundering phenomenon early. For example, Alldridge (2003) saw numerous mechanisms to commit money laundering. Likewise, Levi and Reuter (2006) pointed out that money laundering, unlike other crimes, is notable for its diversity in form, actors, and settings. The countless methods are an enormous challenge for everyone trying to understand how money laundering works.

Scientific literature has utilised the three-stage model to organise the many money laundering methods. Placement, layering, and integration were effectively used as an analytical grid that lets researchers assign the various money laundering methods to individual stages to clarify their function (Irwin et al., 2012; F. Schneider et al., 2006; S. Schneider, 2004; Suendorf, 2001; Unger, 2007). For example, Irwin et al. (2012) applied the three-stage model to data on money laundering from official reports to identify trends in the use of methods across individual stages. However, using the three-stage model for the analysis of money laundering methods poses enormous risks for anti-money laundering. For instance, Cassella (2018) concluded that if prosecutors build their money laundering investigations around the three-

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[2] The terms *methods*, *typologies*, and *techniques* are typically used interchangeably in the field of money laundering (Schott, 2006, pp. I–10). In the following, only the term methods will be used for this thesis.

stage model, they fail to detect criminal behaviour not covered by the standard template. With reliance on the three-stage model, research and practice are at risk of overlooking money laundering methods that are not covered by placement, layering and integration.

In stark contrast, this chapter goes beyond the narrow confines of the three-stage model. Taking the crime science perspective, money laundering is considered a *crime event* that can comprise any behaviour to handle criminal assets. The central building blocks of crime events are money laundering stages and their methods. The former stands for the offender's strategies or goals, and the latter the specific tactics or tools used to achieve these goals. Importantly, money laundering stages and methods are conceptualised as a kind hierarchy, a set of nested concepts that together form the whole money-laundering crime event. With this novel conceptual framework as a starting point, the present chapter aims to identify the key stages and methods during money-laundering crime events.

Code and word frequencies are used to explore money-laundering crime events. Code frequency counts are computed to identify those quasi-sentences found in full judgment transcripts that outline distinct money laundering stages. Word frequency counts are then calculated for quasi-sentences that inform about money laundering stages of the same kind. The rationale is to find recurring keywords indicative of money laundering methods at a given stage of the crime event. Additionally, when the discovered keywords are ambiguous, they are further analysed in the context of the respective money laundering incident to uncover their meaning. Together, code and word frequencies enable the identification of money laundering stages and methods reported in court transcripts.

Original contributions in this chapter are conceptual, methodological and empirical. *Conceptually*, the kind hierarchy offers a novel conceptual framework for the central

building blocks of the money-laundering crime event. In particular, the conceptual framework clarifies the hierarchal relationship between money laundering stages and methods. *Methodologically*, code and word frequency counts represent a new way of extracting information from unstructured textual data on money laundering. In this way, this chapter introduces a new and transparent data analysis procedure for empirical money laundering research. *Empirically*, the analysis of the original dataset entails various money laundering stages and methods found that are barely discussed in the current scientific debate. The analysis adds a new perspective to the discussion about how money laundering works beyond the three-stage model's boundaries.

The chapter is organised as follows: Section one covers the literature review introducing the conceptual framework of this doctoral thesis, where money-laundering crime events are understood as a kind hierarchy of stages and methods. Section two reports the applied research methods, including the sample and data analysis methods used to explore individual money laundering stages and their methods empirically. Section three reports the results of the code and word frequency analysis for individual money laundering stages. Section four entails the discussion of key findings from the code and word frequency analysis and introduces a revised kind hierarchy of money laundering. In the final part, the strengths and limitations of this analysis are discussed.

4.1 Literature review

At the heart of most investigations taking the crime science viewpoint lies the *crime event,* which can be defined as breaking the law at a given time and place (Cockbain & Laycock,

2010; Ekblom, 1994; Wilcox & Cullen, 2018; Wortley et al., 2019). For instance, Ekblom (1994) defines criminal events as conflicts that represent a violation of norms:

> In some respects all criminal events involve conflict: conflict between one individual and another over the ownership of property, over territory, leadership, status, access to rewards; and conflict also between an individual and the state if a law is broken … Until the first threat has been made or the first blow has been struck, it is not possible to identify an offender and an injured party or even a criminal event. To conflict must therefore be added the violation of norms, especially those embodied in criminal law. (Ekblom, 1994, p. 197)

Naturally, if behaviour constitutes a violation of the law ultimately depends on national legislation and can vary from country to country.

In comparison, the three-stage model has little in common with money laundering legislation. Since its introduction in the 1980s, the three-stage model has effectively coexistent next to related broader understandings of the money laundering offence. For instance, Gelemerova (2011, p. 78) criticised conflicts between the three-stage model and existing money laundering definitions:

> the three-stage model is not consistent with the logic of the broad definition that describes as laundering the mere keeping/hiding of crime money at home, right under the proverbial mattress. Additionally, one may wonder where criminals' daily expenses fit in. (Gelemerova, 2011, p. 78)

In particular, the money laundering legislation in the United Kingdom, which constitutes the legal framework most relevant to this thesis, goes way beyond the sequence of placement, layering and integration. According to the Proceeds of Crime Act (2002, Sections 327-329), a

person commits money laundering if they conceal criminal property, make arrangements to facilitate the offence and are found to acquire, use, or possess criminal proceeds. Legislations such as the Proceeds of Crime Act (2002) consider behaviours as part of money-laundering crime events that are not covered under the three-stage model.

A new conceptual framework was needed for all aspects of the money-laundering crime event to be accurately conceptualised. The new conceptual framework of this thesis was designed as *a kind hierarchy*. Collier and Levitskv (2009, p. 270) define kind hierarchies as nested concepts, with subordinate concepts standing for specific kinds of superordinate concepts. A subtype holds specific attributes lacking in other subtypes while simultaneously possessing all attributes of the superordinate concept. In this thesis, understanding the three-stage model as part of a larger kind hierarchy was considered beneficial for two reasons: First, a kind hierarchy makes it necessary to organise ideas about phenomena and ultimately contributes to making associations amongst concepts explicit. Therefore, linking the three-stage model with other concepts was ideal to avoid conceptual ambiguities in money laundering research. Second, kind hierarchies aid the exploratory research agenda, which aims to make conceptual contributions based on empirical evidence. Collier and Levitskv (2009, pp. 269–270) see kind hierarchies as helpful in increasing concepts' analytical differentiation. In this way, kind hierarchies were considered a tool for conceptualising new money laundering practices currently ignored in the three-stage model.

It is helpful to distinguish three components when creating a kind hierarchy. Collier and Levitskv (2009, p. 271) see kind hierarchies as root concepts, overarching concepts, and subtypes. The focal point of a kind hierarchy is the *root concept,* which stands for the point of departure of a given study. Simply put, conceptual hierarchies are built around the root concept.

Once the root concept is named, the overarching concept and subtypes can be identified. The *overarching concept* is superordinate to the root concept, whereas *subtypes* are subordinate to the root concept. Creating kind hierarchies requires naming root concepts, overarching concepts, and subtypes.

Money laundering stages were the root concept. Selecting money laundering stages as the root concept for this kind hierarchy required additional clarifications. Unfortunately, there has yet to be a mutual understanding of what constitutes a money laundering stage in the academic literature. Haphazardly, money laundering stages were referred to as phases, actions or elements (Levi & Reuter, 2006; Petrunov, 2011; F. Schneider et al., 2006; Suendorf, 2001). In this thesis, money laundering stages were considered *strategies*. The basic definition of strategies includes using the instruments of power to the ends set by governments (Edwards, 2017, p. 22). Analogously, strategies in the context of money laundering were defined as using available instruments to achieve specific goals set by offenders. Therefore, the stage as the root concept of this kind hierarchy detailed the specific purpose of money laundering.

Naming the overarching concept to money laundering stages was equally challenging. In search of an overarching concept of this kind hierarchy, the available definitions of money laundering were consulted. The search focused on money laundering definitions compatible with the idea of money laundering stages the root concept. Nonetheless, the scientific literature has put forward countless money laundering definitions. To illustrate, Unger et al. (2006) compared 18 definitions of money laundering, with sometimes contrasting ideas for the activities, criminal assets, and goals associated with the crime. Faced with countless money laundering definitions, the choice of the overarching concept of this kind hierarchy required additional considerations.

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Criminal asset management was chosen as the overarching concept for this kind hierarchy. The overarching concept of criminal asset management was defined as the handling of monetary and non-monetary proceeds of crime (van Duyne et al., 2018, p. 94). The concept of criminal asset management was coined by van Duyne (1998, 2003, 2013) and considered advantageous for four reasons: First, criminal asset management is compatible with money laundering stages as the root concept. A stage stands for the distinct strategy or goal of the offender when handling criminal assets. Second, criminal asset management covers monetary and non-monetary proceeds of crime. Considering all criminal proceeds was thought beneficial since the processing of non-monetary criminal proceeds stands for an understudied facet of money laundering (van Duyne et al., 2018, p. 120). Third, criminal asset management concerns all money laundering stages (van Duyne et al., 2018, p. 93). Adopting a broader view of possible strategies for criminal asset management was considered helpful for this exploratory study because it enables stages not covered by the three-stage model to be incorporated. Fourth, criminal asset management was well-suited to analyse money laundering in the United Kingdom, whose legal framework considers effectively any activity related to criminal property a criminal offence (Proceeds of Crime Act, 2002, Sections 327-329). For those reasons, criminal asset management[3] was selected as the overarching concept for this kind hierarchy of money laundering.

Money laundering methods were considered subtypes in this kind hierarchy. Typically, methods and typologies are defined in a generic everyday language only. For example, Schott (2006, p. I–10) defined methods and typologies simply as techniques to launder money. Likewise, van Duyne et al. (2018, pp. 146–147) had to resort to the dictionary to narrow down

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[3] The terms *money laundering* and *criminal asset management* will be used interchangeably throughout this doctoral thesis.

the meaning of typologies, defining the term as the study of types. In this thesis, methods and typologies are seen as the *tactics* of money laundering. If stages are the strategies of money laundering, methods stand for the tactics to achieving these ends. Militarily, tactics contain the instruments to implement the goals set out in the strategy. Consequently, tactics are inseparably linked to strategies (Edwards, 2017, p. 23). Analogously, this understanding neatly applies to money laundering research, where methods and typologies are considered integral to money laundering stages. For example, van Koningsveld (2013) defined typologies in the following manner:

> In order to see through a money laundering process, the different acts and techniques within the various money laundering stages must be clear. Investigation officers and the public prosecutors can use the so-called money laundering 'typologies'[…] 'objective' characteristics of financial acts and accompanying observable phenomena that may suggest money laundering, requiring a degree of clairvoyance. (van Koningsveld, 2013, p. 442)

From this perspective, methods are effectively nested in stages and can be seen as the instruments to achieve the objectives of a given stage of the money-laundering crime event.

Figure 9 summarises the relationship between the overarching concept, root concept, and subtypes of the newly created kind hierarchy of money laundering. The newly created conceptual framework of money laundering has two characteristics worth pointing out. First, subordinate concepts hold all attributes of the superordinate concepts plus unique features to distinguish themselves. To illustrate, all money laundering strategies are ultimately criminal asset management, but each strategy stands for specific forms of criminal asset management. Second, the kind hierarchy of money laundering is governed by inverse variation. Concepts on

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the highest level of the concept hierarchy have fewer attributes and apply to more cases. In comparison, concepts further down the kind hierarchy have more defining attributes and are less commonly observed (Collier & Levitskv, 2009, pp. 271–272). The kind hierarchy of money laundering represents the conceptual starting point of this thesis and its objective to understand how money laundering works.

Figure 9

Kind Hierarchy: Money-Laundering Crime Event
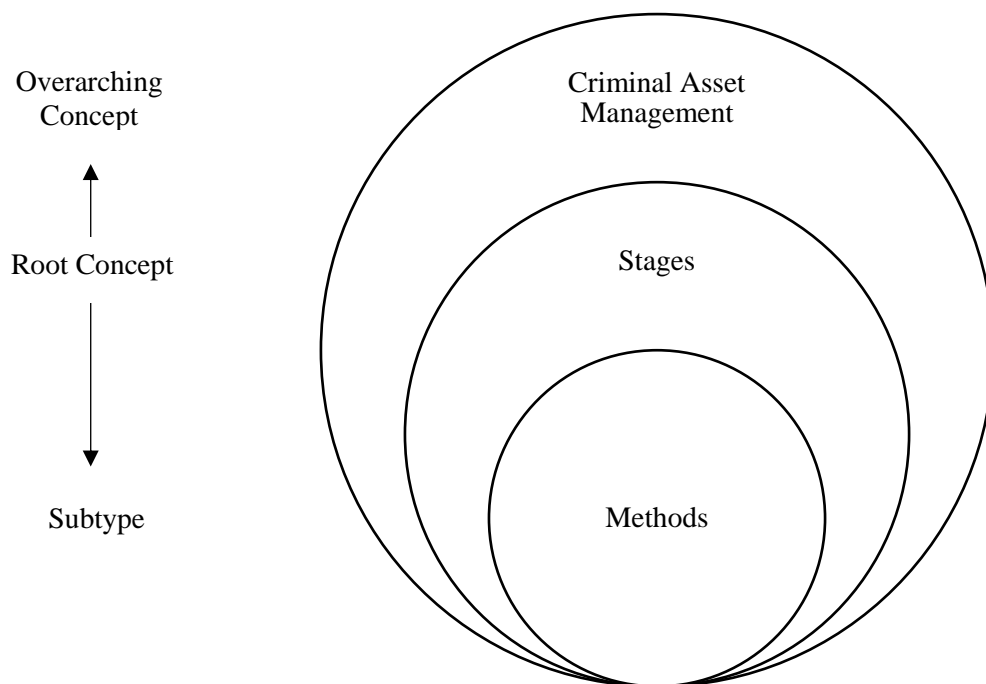
4.2 Method

This section outlines the research approach to identify money laundering stages and their methods in the text. Subsection one entails a description of sample 1, containing relevant textual information drawn from full judgment transcripts of the Court of Appeal and

Administrative Court from England and Wales. Subsection two presents the data analysis procedure used for the cross-case and within-case analyses.

4.2.1 Sample 1

Sample 1 comprised 1,364 coded quasi-sentences. In this thesis, quasi-sentences are defined as natural sentences holding unique information about money laundering offences. The content analysis of 180 full judgment transcripts (1997-2017) from the Court of Appeal and Administrative Court of England and Wales resulted in 1,364 quasi-sentences. Codes were assigned to each quasi-sentence depending on the information about the money laundering offence. In total, 13 codes were applied to 1,364 quasi-sentences.

4.2.2 Data Analysis

Cross-case and *within-case analyses* were mixed for the data analysis in this chapter. Table 4 outlines the cross-case and within-case analysis as the analytical strategies to identify money laundering stages and methods in full judgment transcripts. All quasi-sentences representing distinct money laundering stages were compared across money laundering incidents to identify reoccurring features that may indicate distinct money laundering methods. If the cross-case analysis did result in ambiguous findings, within-case analyses of individual money laundering incidents were conducted. The combination of cross-case and within-case analyses represents a more refined understanding of money laundering stages and methods. Ultimately, the new conception lays the foundation for more detailed descriptions in the following chapters.

Table 4

Cross-Case and Within-Case Strategies: Money Laundering Stages and Methods

Analytical Strategy	Purpose	Case Unit	Outcome
Cross-Case and Within-Case Analysis	Identifying the Money Laundering Stages and Methods	Money Laundering Incident	Properties/ Subcodes

Code and word frequency counts were used as the data analysis procedure to identify money laundering stages and methods in full judgment transcripts. To that end, the data analysis in this chapter was a two-step process: First, *code frequencies* were computed to map the type of information contained in quasi-sentences. Naturally, not all quasi-sentences contained information about money laundering stages. Instead, quasi-sentences could also inform about situational factors such as the month and year the money laundering offence took place or the type of illegal offence that generated the proceeds for the subsequent money laundering offence. In contrast, this chapter aims at quasi-sentences informing about money laundering, while circumstantial factors will be discussed separately. Consequently, only quasi-sentences informing money laundering stages and their methods were considered helpful for this chapter. Second, *word frequencies* were calculated for quasi-sentences holding information about distinct money laundering stages. In this thesis, methods were nested properties of money laundering stages. As such, word frequency counts were calculated to identify recurring text segments that may indicate money laundering methods typically used at this stage of the money laundering process. Code and word frequency counts in combination enabled the identification of money laundering stages and methods in data.

Code frequencies were computed in Microsoft Excel. The total number of quasi-sentences found across all court transcripts was manually counted and recorded for each code. The resulting absolute and relative frequency counts for individual codes allowed the

information contained in quasi-sentences across all full judgment transcripts to be mapped. Moreover, word frequencies were calculated in NVivo 12. Word counts refer to the number of times keywords or groups of keywords (sharing the same stem) were mentioned in quasi-sentences of the same code. Here, word frequency counts for the 50 most commonly used keywords per code were computed in NVivo 12. Additionally, for ambiguous terms, keyword-in-context lists were created. Keyword-in-context lists are a common feature of content analysis and enable the setting in which each word appears to be analysed (Drisko & Maschi, 2015; Krippendorff, 2019; Weber, 1990). The keyword-in-context lists represented the within-cases analysis. The Word Tree feature in NVivo 12 was used to compute keyword-in-context lists.

4.3 Results

This section reports the code and word frequencies for the 1,364 quasi-sentences extracted from 180 full judgement transcripts from the Court of Appeal and Administrative Courts of England and Wales (1997-2017). The first part of the section outlines the code frequencies for the identified money laundering stages. The second part reports the word frequency counts to identify recurring text segments of these quasi-sentences. Code- and word frequency counts allowed money laundering stages and their methods outlined in full judgment transcripts to be identified.

4.3.1 Code Frequencies

In this section, the code frequencies applied to 1,364 quasi-sentences are reported. Figure 10 breaks down the absolute and relative frequencies of quasi-sentences per code. The final code

set entailed 13 codes applied to 1,364 quasi-sentences, measuring unique features of the money laundering process. Remarkably, less than ten percent of all quasi-sentences extracted from full judgment transcripts relate to aspects of the money laundering offence covered in the three-stage model. Specifically, 6.16% of the quasi-sentences described the *integration* stage, where illicit funds are either spent or invested in the legal economy. Just 1.54% of the quasi-sentences detailed the *layering* of illegal funds inside the financial system. Finally, 1.03% of quasi-sentences reported the *placement* of cash proceeds into the financial system. In total, less than ten percent of quasi-sentences were concerned with information related to the money laundering sequence of placement, layering, and integration.

Most quasi-sentences outlined alternative money laundering stages. Seven codes referred to quasi-sentences describing alternative money laundering stages. Here, 19.5% of the quasi-sentences outlined how criminals purposefully *changed the nominal ownership of criminal assets*. Moreover, 7.55% of the quasi-sentences detailed the *storage* of criminal property for future use. Additionally, 7.48% of the quasi-sentences reported the *transportation* of criminal property and *intermediate actions* each. The former entailed the physical movement of criminal assets from one place to another, and the latter referred to preparational steps leading up to the money laundering offence. Furthermore, less common were quasi-sentence that described the *exportation*, *untraceability*, and *justification* of illegal proceeds, representing 2.35%, 2.42%, and 1.1%, respectively, of the quasi-sentences. Lastly, quasi-sentences describing the immediate circumstance, predicate crimes, and unknown factors of the money laundering offence made up some 43% of the text. These text segments will be discussed separately in the next chapter.

Figure 10

Code Frequencies

Untraceable, 32, 2.35%
Transportation, 102, 7.48%
Storage, 103, 7.55%
Predicate offence, 191, 14.00%
Placement, 14, 1.03%
Ownership, 266, 19.50%
No Code Applies, 25, 1.83%
Layering, 21, 1.54%
Justification, 15, 1.10%
Intermediate action, 102, 7.48%
Integration , 84, 6.16%
Export, 33, 2.42%
Circumstances, 376, 27.57%
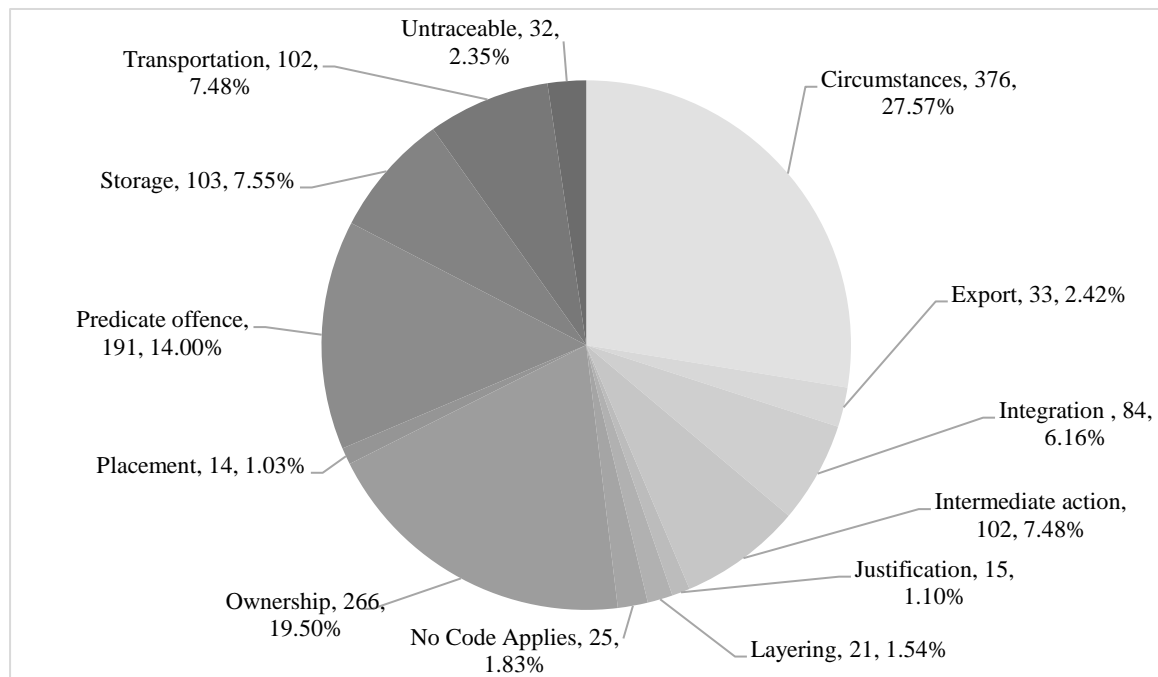
4.3.2 Word Frequencies

This section reports the word counts in quasi-sentences portraying money laundering stages. For each code, word frequency counts for the 50 most commonly used keywords were computed in NVivo 12. Here, word counts refer to the number of times keywords (sharing the same stem) were mentioned in quasi-sentences. Where the term was ambiguous, a keyword-in-context analysis in NVivo 12 was conducted to assess their meaning in the overall context. Excluding quasi-sentence outlining situational factors, word frequency counts were calculated for 797 quasi-sentences and are reported below.

4.3.2.1 Exportation. This subsection outlines the word counts for 33 quasi-sentences portraying the exportation of illegal proceeds as reported in full judgement transcripts of the

Court of Appeal and Administrative Court of England and Wales. Appendix VIII shows the 50 most frequent words judges used to describe the exportation of illegal proceeds. The word frequencies suggest that offenders, when moving criminal property abroad, mainly rely on banks, smuggling, and euros. First, the quasi-sentences outlining how offenders moved criminal assets from one country to another often contained references to the banking system. Here, judges referred to "account" or "accounts" 12 times, making it the most frequently reported keyword for this quasi-sentence category. Furthermore, the keywords "bank" or "banks" were used nine times when depicting exportation. Finally, eight times the keywords "transfer" or "transferred" were mentioned concerning banks. This interpretation was confirmed by the keyword-in-context analysis illustrated in Figure 11.

Figure 11

Keyword-In-Context: transferred
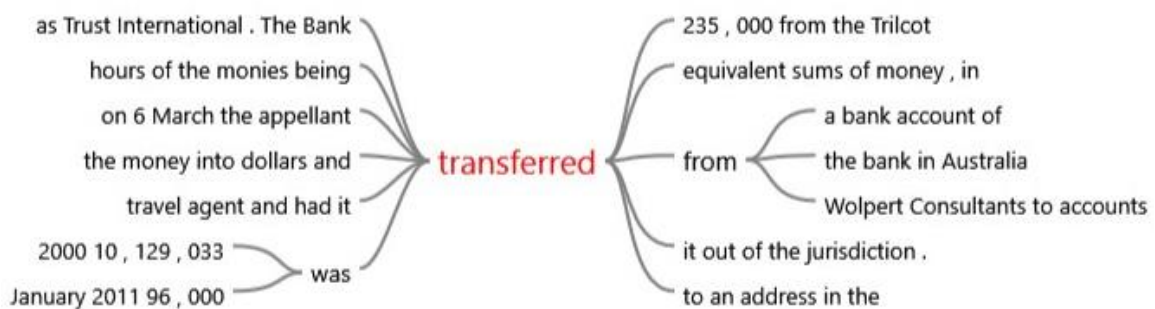
Second, various keywords suggested smuggling to be essential for the exportation of criminal assets. Here, four times judges described how offenders would be "returning" from a trip aboard while smuggling illegally generated currency into the country. Three times quasi-sentences had references to a "holdall", which was used to carry cash across borders. The

keywords "driver" and "flew", specifying the distinct mode of smuggling, were mentioned twice each. Third, judges referred to foreign currencies when detailing how criminals exported their proceeds of crime. In doing so, judges mentioned "euro" or "euros" eight times when describing the exportation of criminal proceeds.

4.3.2.2 Integration. In this subsection, word frequency counts for 84 quasi-sentences are reported, where judges outlined the integration of illegal profits into the economy. Appendix IX lists the 50 most frequent keywords in quasi-sentences of this kind. Most statements entailed synonyms for the act of integration, while some quasi-sentences also outlined the purchased goods and the respective payment methods. First, most keywords were synonyms for integration. With 30 mentions, the keywords "purchased" and "purchase" were the most frequently used to describe the integration of criminal proceeds. Along similar lines were the keywords "paid", "used", and "using", "bought", "spent", and "pay", with 14, 13, seven, five, and three mentions, respectively.

Second, word frequencies mentioned the distinct goods and services purchased at the integration stage. Most often, offenders buy foreign currencies with criminal proceeds. Eight times judges used the keywords "exchange" or "exchanged" to refer to currency exchange services and the act of exchanging monies. Five mentions of keywords "converted" and "convert" were counted as well as four mentions of "currency". Similarly, judges detailed distinct currency exchanges into "guilders" and "euros" with four and three mentions, respectively. Additionally, purchased goods also included houses and cars. Eight mentions each of "mortgage" and "property" plus four mentions of the keyword "house" were found in statements depicting the integration of illicit funds. Moreover, seven counts of the keyword "car" and three mentions of the German car brand "bmw".

Third, coded quasi-sentences covered keywords that outline payment methods used to purchase goods and services. Keywords indicating modes of payment included "cash", "account" and "accounts", "bank", "deposit", "card", "cheque" and "cheques", and debit were mentioned 13, ten, eight, eight, five, four, and three respectively.

4.3.2.3 Intermediate stages. The present subsection reports the word frequencies of the keywords from 102 quasi-sentences detailing intermediate activities related to money laundering offences. Appendix X covers the 50 most frequent keywords for quasi-sentences of this code. By and large, depictions of intermediate actions predominantly centre around financial accounts, cash, automobiles, and offenders' communication. First and foremost, judges described preparations to open and use financial accounts for money laundering. Twelve times judges mentioned the keywords "account" and "accounts", which made them the most frequently used terms of this code. Likewise, the keyword "bank" had seven mentions. Closely related, nine references to the keywords "open", "opening", and "opened" were counted. Here, the keyword-in-context list showed that judges mainly referred to the word when showing offenders' attempts to set up the accounts, as shown in Figure 12 below.

Figure 12

Keyword-In-Context: opened
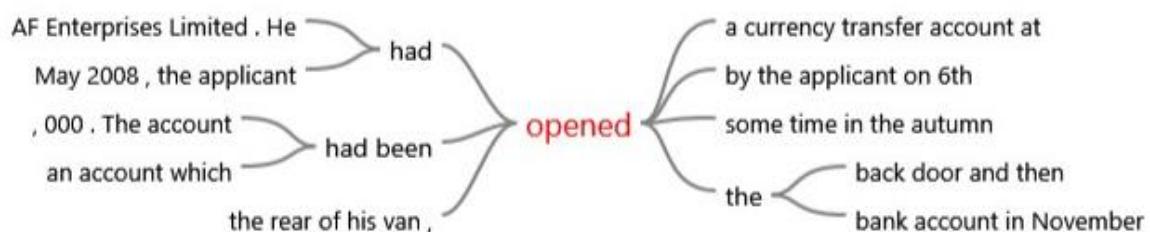
Additionally, the keyword "details" was counted five times. The keyword-in-context analysis showed that judges used the term to describe actions related to bank accounts and personal information, as outlined in Figure 13. Finally, the keyword "fictitious" showed four counts, which judges used to detail offenders' usage of fabricated documents to set up financial accounts.

Figure 13

Keyword-In-Context: details

a vehicle . He gave false
Abdul Ashimi's Barclays Bank
immediately faxed Excel the → account
bank to a Barclays account .
Qingdao had changed his banking
→ details ←
. The police found a sum
a Prominex sales invoice .
and provided the accused Abdul
for payment . On that date ,
were given of the new
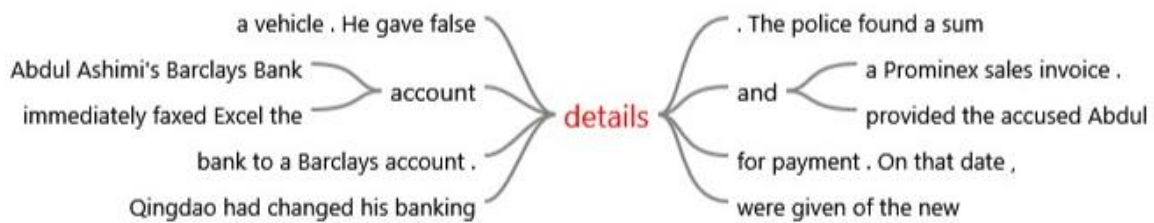
The second group of quasi-sentences that depict intermediate activities detailed cash usage. Judges mentioned the keyword "cash" six times. The keyword was used to depict offenders counting cash (R v Blake, 2016), departing from a cash drop-off (R v Bowling, 2015), setting up cash exchanges (R v Haidary & Ors, 2013), bringing cash into a hotel room (R v Simpson, Fadden, Dixon, Grant, Lille, Allsopp, 1997), and paying the rent for a safety deposit (R v Smale, Smale, 2008), which later was used to store the profits of crime. In addition, the keyword "hotel" appeared nine times in transcripts to describe offenders entering premises to collect or hand over cash. Furthermore, five mentions of the keywords "holdall" or "holdalls" and four references to "bag" were identified in quasi-sentences.

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The third group of quasi-sentences that outlined intermediate actions focused on the use of automobiles. References to various kinds of automobiles were found in coded text segments. For the keyword "van", ten mentions were counted. Nine references each to keywords "car" and "vehicle" or "vehicles" were found in coded quasi-sentences. The text presents five and four mentions of "taxi" and "bmw", respectively. Correspondingly, various keywords detailed those intermediate actions, including automobiles. The keyword "got" was referenced ten times, with its keyword-in-content analysis to show that judges primarily used the verb to detail how offenders entered and left automobiles. Figure 14 shows the keyword-in-context diagram for the word "got".

Figure 14

Keyword-In-Context: got
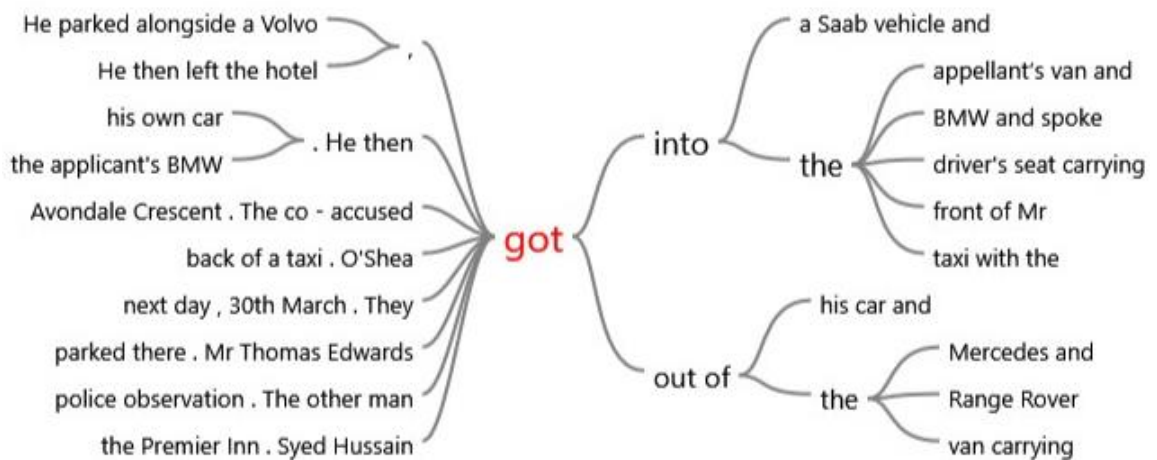
In addition, nine times the keyword "drove" and eight times "driving" or "drive" mainly outlined the arrival to and departure from the crime scene. However, in two instances, judges used the keyword to portray how offenders used driving licences to open bank accounts (R v

Shringi, 2013; R v Suleman, 2009). Moreover, the keywords "parked" and "park" were counted eight times and, when examining their context, were exclusively used to portray how offenders positioned their vehicles for cash handovers. For the most part, cars were parked next to each other. Finally, judges used a set of keywords to portray movements around automobiles. Six remarks, including the keywords "returned" or "return", were counted, which, according to the keyword-in-context list, exclusively portrayed offenders' movements in and outside of cars. Four mentions of the keyword "front" were identified, where judges mostly depicted offenders' movements to the front seats inside a car. One judge mentioned the keyword "door" thrice to portray how the offender entered and left vehicles.

The fourth group of quasi-sentences summarising intermediate actions entailed offender communication related to money laundering offences. Four times each, the keywords "phone" and "telephone" or "telephoned" or "telephones" were referenced. The keyword-in-context list showed that judges mentioned a "phone" when describing how offenders made calls during an ongoing money laundering operation or got instruction via text, as illustrated in Figure 15 below.

Figure 15

Keyword-In-Context: phone

accounts . He received instructions by
foyer , speaking in his mobile
note , whilst talking on his
was seen to make several

phone

, looking through the windows towards
. 2 . An officer from the
calls and just before 2
text messages from Pakistan . He
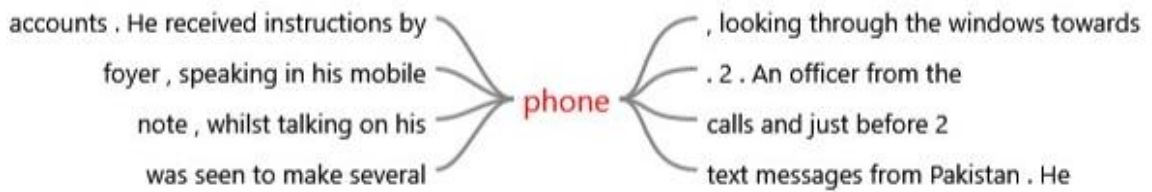
Similarly, judges used the keywords "telephone" and "telephoned" to outline how offenders notified co-offenders (R v Bagnall, 2007), made arrangements (R v El-Kurd, 2000), or received instructions (R v Spencer, 2012). Only in one case, the purchase of a telephone was discussed (R v Shringi, 2013). In contrast, the keyword "conversation" with three counts was used by judges to describe face-to-face communication and not telephone conversation. Additionally, when mentioning the keyword "called", judges named offenders.

4.3.2.4 Justification. This subsection entails the word frequency counts for keywords found in 15 quasi-sentences that describe the justification of criminal proceeds. Appendix XI shows the 50 most frequent keywords in quasi-sentences with this code. For the most part, the quasi-sentences of this code included keywords that suggest the offender's trickery. In particular, nine counts of the keywords "false" or "falsely" were made, making them the most counted for this code. Here, judges used the word as a precursor to various deceptive behaviour. In contrast, the keyword "fictitious" was counted twice, though only concerning creating a fake persona. Likewise, the keyword "bogus" was used once to describe the altered service manual. Other keywords in coded quasi-sentences specified the goods and services used to create a false legitimate origin for criminal assets. Six mentions of the keywords "accounts" or "accounts" were found in text segments suggesting their use at the justification stage. Moreover, four

mentions of the keywords "documents" and "documentation" were present in coded statements that indicate the use of altered paperwork without providing any specification. Additionally, four times the keyword "company" was mentioned, where judges detailed dishonest activities inside businesses to forge a legitimate appearance for illegal funds. As well, the keywords "order", as well as "invoice" or "invoices", were observed thrice and twice, respectively, stating the kind of paperwork offenders tampered with in order to achieve a legitimate appearance. Finally, keywords detailed the creation of a false legitimate origin for stolen automobiles. Four counts each for the keywords "new", "numberplate", or "numberplates", "vehicles", and "vehicles" were identified in coded text segments. Three times each, the keywords "cloned" or "cloning", "focus", "VIN" are detailed. These keywords, in a nutshell, outlined how offenders created a new identity for stolen cars by cloning, which entails installing new number plates and changing the vehicle identification number (VIN).

4.3.2.5 No Code Applies. This subsection reports word frequencies for 25 quasi-sentences coded as No Code Applies. No Code Applies as measurement was created to ensure the exhaustiveness of the code set and, as such, account for all quasi-sentences that did not qualify for other codes. Appendix XII displays the 50 most frequent words found in quasi-sentences for which no code was applied. Keywords found in quasi-sentences of this code typically portrayed the possession and conversion of criminal proceeds. First, text in this category informed about offenders found in possession of money, usually at the time of their arrest. The keywords "cash" or "cashed" were mentioned ten times, making them the most frequently observed. Likewise, four references to "note" and "notes" were found in texts. Moreover, three times "sum" or "sums" were used as synonyms for criminal proceeds. Altogether, each keyword portrayed the criminal proceeds to be cash. In addition, judges linked criminal proceeds with the offender. Nine times the keyword "found" was mentioned in coded

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quasi-sentences. The keyword-in-context analysis illustrated in Figure 16 shows that the word was primarily used concerning law enforcement checks and arrests. Along similar lines, judges mentioned the keyword "possession" eight times. Lastly, the keywords "arrested" or "arrest" were referenced eight times. Four mentions of offenders being "searched".

Figure 16

Keyword-In-Context: found
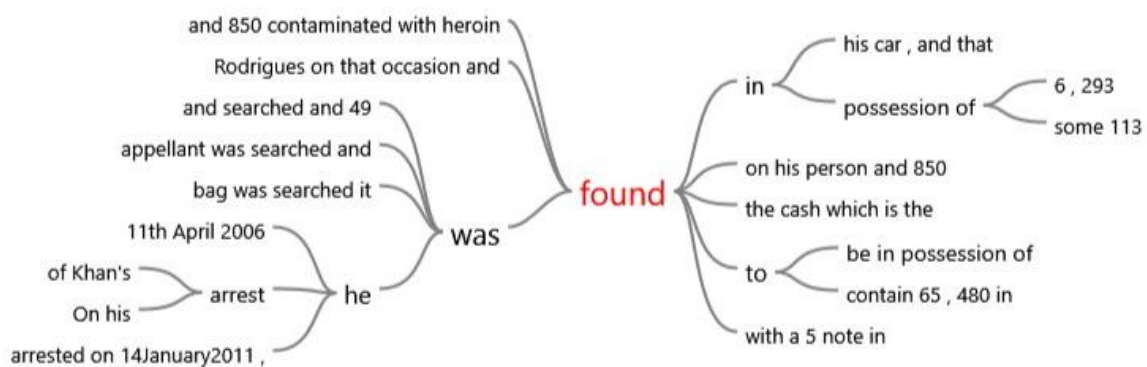
Second, quasi-sentences with the label No Code Applies informed about the conversion of illegal proceeds. Four times the keyword "sold" was used to detail how offenders traded stolen property or goods previously bought with illegal proceeds. Here, it is important to note that judges occasionally highlighted the timing of the sales. As outlined in Figure 17, the keyword-in-context analysis saw mentions of "weeks" and "month", which may indicate a deliberate action.

Figure 17

Keyword-In-Context: sold
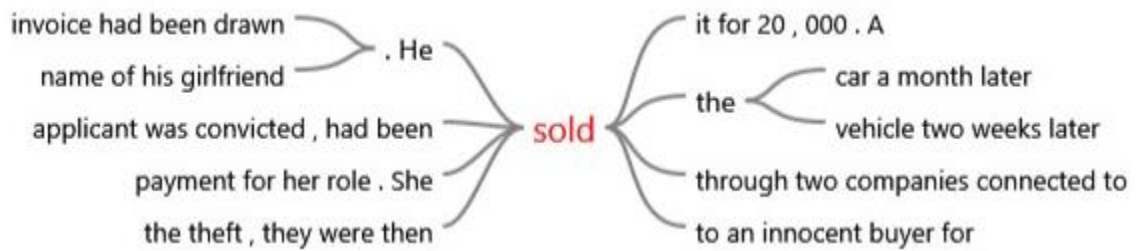
Nevertheless, some of the keywords found in the coded statements were used in multiple contexts. Four mentions of the keyword "car" were found in statements, where judges detailed offenders to sell their vehicle or to be found in possession of cash sitting in the car. Likewise, judges mentioned "vehicle" and "vehicles" three times. Moreover, three references to cheques portrayed both the possession and conversion of criminal property. Judges outlined how offenders were found in possession of stolen blank cheques. Another instance showed judges detailing how offenders received a cheque for selling a vehicle previously bought with drug money.

4.3.2.6 Layering. The subsection reports the word frequency counts for 21 quasi-sentences that detail the layering of criminal assets. Appendix XIII covers the 50 most frequently observed keywords for the coded quasi-sentences. Quasi-sentences with this code primarily entailed synonyms for the act of layering. In line with the definition of this stage, keywords with the highest frequency counts described transfers from one bank account to another. Twenty mentions of "account" and "accounts" were counted, which makes it the most frequently used keyword for coded statements of this kind. In addition, quasi-sentences entailed references to a "bank" ten times. Equally important, ten counts of the keywords "transferred"

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and "transfer" were found in texts. Additionally, eight references to the keyword "paid" were identified. Alternative synonyms to suggest wire transfers included "payment" or "payments" and "transactions", which were mentioned twice each. Infrequently, statements included references to using payment orders to initiate bank transfers. Here, three times judges referred to the keyword "draft" or "drafts" and twice "cheques".

4.3.2.7 Ownership change. This subsection reports the word frequency counts for 266 quasi-sentences that detail changes in nominal ownership of the proceeds of crime. Appendix XIV outlines the 50 most frequent keywords in quasi-sentences informing about recipients and modes of changing ownership. First, quasi-sentences in this category indicate individuals and companies as participating parties, where the nominal ownership of criminal proceeds changes. Twenty-eight references to "company" or "companies" as well as seven mentions of "business" or "businesses" were found in coded text segments. Moreover, judges used the keywords "name", "named", "namely", or "names" twenty-five times while providing additional details about people and companies complicit in the money laundering operation. Likewise, twenty-two counts of "called" and "call" were present in coded text accompanied by depictions of offenders and businesses. Figure 18 shows the keyword-in-context for "called". Finally, judges referred to the keywords "control", "controlled", or "controller" to highlight the owners of company accounts.

Figure 18

Keyword-In-Context: called
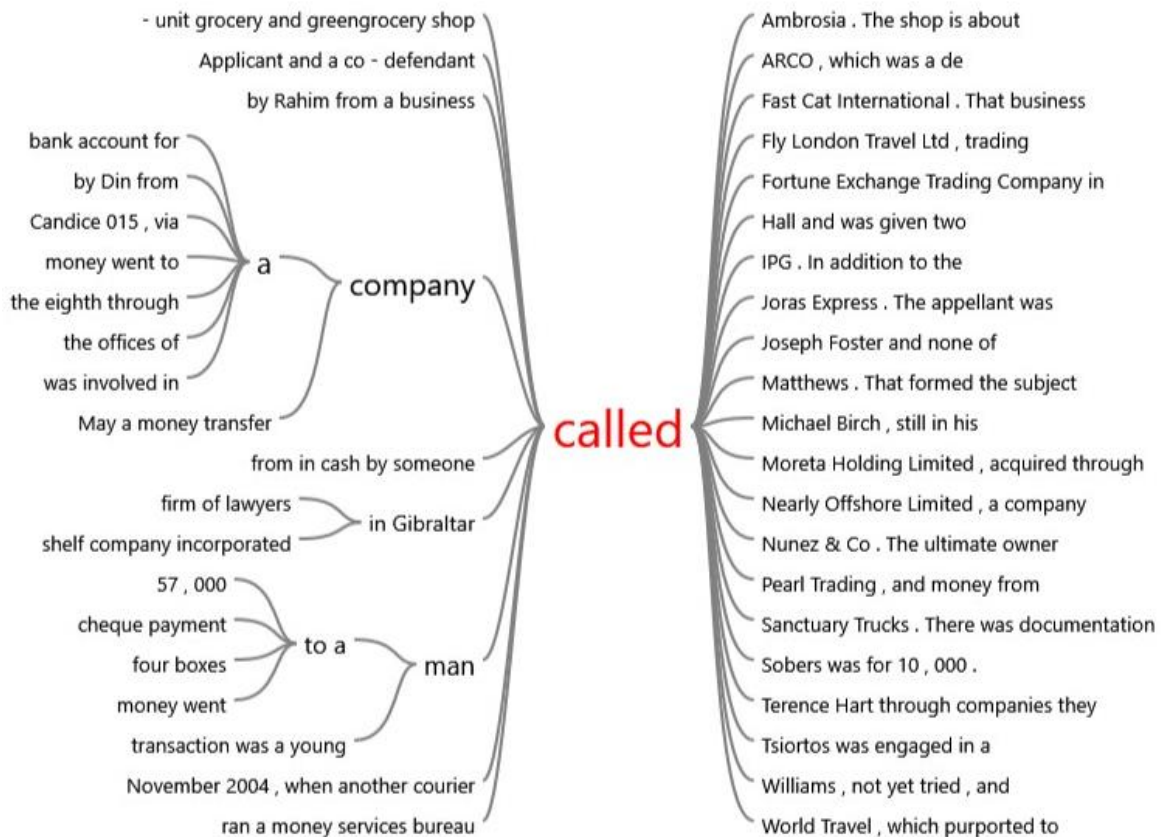
Second, word frequency counts suggest the importance of wire transfers and handovers for changing the ownership of criminal assets. On the one hand, judges outlined wire transfers from and to individual customer and business accounts. One hundred seven mentions of "account" or "accounts" were counted in coded quasi-sentences, which makes them the most frequently used keyword for this code. Here, account holders included both companies and individuals. Moreover, forty-seven counts of the keywords "transfer", "transferred", "transferring", or "transfers" were present in the coded text. Typically, these keywords detail offenders wiring money to individual and business accounts. In one transcript, however, the keyword did not suggest financial transactions but a transfer of a property title (see R v

Robinson, 2012). Additionally, thirty-three times, the judges referred to the keyword "bank", which was only used in combination with the keyword "account". Twenty-six mentions of the keyword "paid" and seven (0.26%) references to "payment" were found in transcripts to detail, for the most part, deposits made into bank accounts. Likewise, judges made 22 references to "cheques", which offenders typically used to initiate bank transfers. Finally, nine counts of the keyword "passed", "pass", or "passing" were counted, which judges used to outline the transmission of money from one individual and business accounts to another. On the other hand, word counts suggest cash handovers as a recurring feature of ownership changes. Thirty-one times, judges mentioned the keyword "cash" when depicting the criminal assets being exchanged. In a few instances, cheques were also mentioned as the medium of exchange (see R v Wedgebury, 2011). In addition, several keywords detailed the exchange of cash between criminals. Nineteen references to "hands", "hand", "handed", or "handing" were made in coded statements, as outlined in Figure 19 below. Along similar lines, 11 counts of the keyword "given", nine mentions of "took", and seven references to "collected", "collect", or "collecting" were found in quasi-sentences.

Other keywords detail the packaging of cash for the exchange. Judges mentioned the keywords "bag" or "bags", "holdall" or "holdalls", and "suitcase" 26, ten, and nine times respectively. Noteworthy, nine times, judges referred to "box" or "boxes", ranging from cardboard boxes to safety deposit boxes. Additionally, keywords outline the importance of automobiles for cash handovers. Eighteen mentions of "car" or "cars" and thirteen references to "vehicle" or "vehicles" were found in coded quasi-sentences. By and large, cars functioned as a means of transport for cash. Seven references to the "boot" of a car were made by judges, where offenders used stored in the boot of automobiles to transport and stored packaged cash before and after handovers.

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Figure 19

Keyword-In-Context: handed
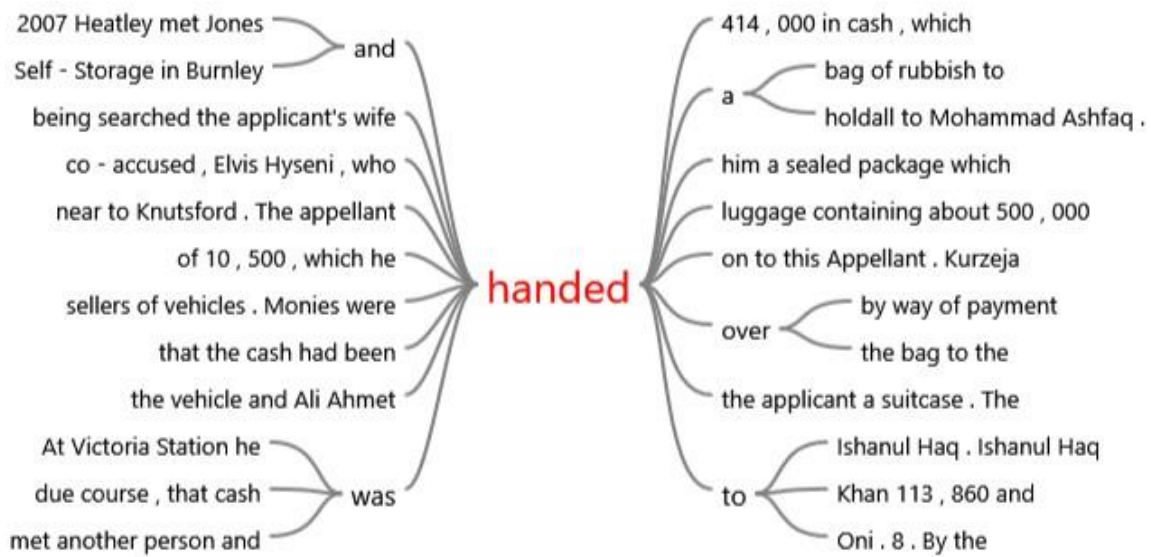
4.3.2.8 Placement. This subsection covers the word counts for 14 quasi-sentences that outline the placement of criminal proceeds into the financial system. Appendix XV reports the 50 most frequent words of quasi-sentences of this code. The quasi-sentences predominantly consisted of keywords simply outlining the essential components of the activity, with only little novel information. First and foremost, keywords in quasi-sentences suggested the involvement of bank accounts. Judges mentioned the keyword "account" or "accounts" in text segments 11 times, representing the highest word count in this category. Similarly, five times the keyword "bank" was found in quasi-sentences. To a lesser degree, the keyword "different" was mentioned twice, suggesting the placement into multiple bank accounts, as illustrated in Figure 20.

Figure 20

Keyword-In-Context: different

Another set of keywords outlined how offenders introduce criminal assets into the banking system. Seven mentions of "paid" as well as three counts of the keywords "pay" or "paying" were counted quasi-sentences. Furthermore, judges made three references to the keywords "deposit", "deposited", and "depositing". Lastly, judges specified the criminal proceeds. Five times judges referred to the keyword "cash" to depict placement. Three mentions of the more generic keyword "money" were found in coded text parts.

4.3.2.9 Storage. This section presents the word frequencies for 103 quasi-sentences detailing the storage of criminal proceeds. Appendix XVI reports the 50 most frequent keywords for these coded quasi-sentences. Overall, quasi-sentences of this kind mainly detailed the stored items and storage location. First, keywords suggest offenders store illegal cash next to other crime-related items. Coded text included various synonyms for money. Forty-eight mentions of the keyword of "cash" were counted. Ten references to the keyword "money" existed. Seven counts of the keywords "sum" or "sums" were present in the text, often used as a synonym for cash. Six times the keyword "notes" was identified in coded statements. Along similar lines were mentions of foreign currencies. Five mentions of the keywords "euro" or "euro" were included in the texts. Coded quasi-sentences, however, also informed about those items found at storage locations next to illicit funds. Here, in four quasi-sentences, judges referred to "documents". The keyword-in-context diagram outlined in Figure 21 showed that,

where specified, documents relate to bank accounts and, in one instance, properties in Bulgaria. Additionally, four mentions each of the keywords "drugs" or "drug" and "mobile" were counted, of which the latter referred to phones and top-up cards found at storage premises. Lastly, three mentions of "machine" or "machines" were counted, referring to counting machines.

Figure 21

Keyword-In-Context: documents

Second, quasi-sentences described the storage location of criminal assets. Judges often mentioned offenders' residences. Twenty-two references to "home" and "homes" were counted in statements. Fifteen times judges referred to the keyword "house", which mainly referred to places offenders lived. Five references each to "address" and "flat" were made in texts. Here, both keywords referred to the address and flat of the offenders. Other keywords, however, were less informative. Six counts of the keyword "premises" were found in quasi-sentences, mostly without detailing the kind of place. Only one judge put forward additional information and described the respective premises as self-storage businesses (R v Bowling, 2015). In one quasi-sentence, the judge only referred to the keyword "house", and it was unclear if it was the offender's home (R v Samar, 2014). Closely related, some keywords further detailed the storage locations inside buildings. Fourteen references to "box" or "boxes" were found in text

segments. The keyword-in-context diagram in Figure 22 below shows shoe boxes, metal boxes, and safety deposit boxes as containers for criminal assets.

Figure 22

Keyword-In-Context: box
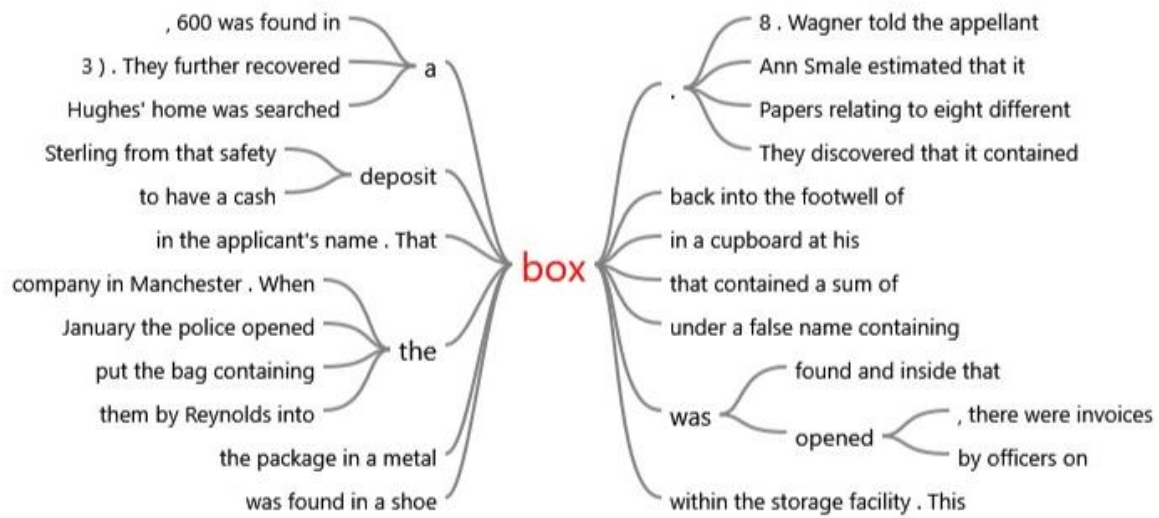
Additionally, eleven mentions of the keyword "safe" marked the specific spot where money was stored in buildings. Ten counts of the keywords "bag" and "bags" were mentioned in quasi-sentences, including carrier bags, money bags, plastic bags, quick-drop bags, self-seal bags, and sports bags. Furthermore, judges sometimes referred to "bedroom" or "bedrooms". Six references to the keyword "room" were counted. Other than physical storage, offenders put criminal proceeds into bank accounts for storage. Judges mentioned "account", "accounted", "accounting", or "accounts" nine times when detailing the storage of criminal funds. Likewise, seven references to the keyword "bank" were made.

4.3.2.10 Transportation. The subsection reports the physical transportation of criminal assets outlined in 102 quasi-sentences. Appendix XVII reports the 50 most frequent keywords found in quasi-sentences outlining the transportation of illegal profits. Quasi-sentences of this category summarised the type of criminal assets shipped and the means of transportation. First, offenders mainly transported cash. Judges mentioned the keyword "cash" thirty-three times, which was the most commonly used word in this group of quasi-sentences. Along similar lines, references to foreign currencies were included in text segments. Eight mentions each of the keywords "money" and "sum" were counted. Likewise, four references by judges to the former Dutch currency "guilders" were made. Similarly, three times judges mentioned "euros". On rare occasions, the criminal asset was transported next to crime-related items or objects. This interpretation is supported by quasi-sentences, where judges mentioned the keyword "heroin" three times.

Second, quasi-sentences depicting the physical transportation of criminal assets also specified the means of transportation. In doing so, judges referred to various containers used to transport illegal proceeds. The keywords "bags" or "bag" were named in 22 quasi-sentences. Closely related, the keywords "plastic" and "carrier" were mentioned four and three times, respectively, detailing the bags offenders used to ship illicit gains. Coded statements also included five counts of the keyword "holdall" or "holdalls". Moreover, judges described the transportation of money in boxes and envelopes. Six references to the keyword "box" and three mentions of the keywords "envelopes" or "envelope" were found in text segments. Finally, other keywords specified the action of transportation by vehicle or on foot. Specifically, the keywords "car" or "cars" and "vehicles" were counted eight and five times, respectively. Likewise, the keywords "driving" and "drive" had six mentions, the word "drove" was used five times, and the verb "driven" was found in three coded statements. In contrast, five

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mentions of the keyword "carried" or "carrying" suggested offenders transport criminal proceeds on foot.

4.3.2.11 Untraceability. The last subsection reports the frequency counts for keywords found in 32 quasi-sentence depicting offenders' efforts to make illegal proceeds untraceable. Appendix XVIII covers the 50 most frequent keywords mentioned in quasi-sentences of this code. On the whole, coded statements outlined the essential components of this money laundering practice while hinting at the importance of timing. Specifically, statements predominantly entailed references to offenders withdrawing cash. Twenty mentions of the keyword "cash" were counted, making it the most frequently counted keyword in this code. Nine times the keyword "money" was mentioned in the text. Another set of keywords depicted removing money from bank accounts. Fifteen references to the keyword "withdrawn", nine mentions to the keyword "withdrew", and seven of "withdraw", "withdrawal", "withdrawals" were counted. Nine mentions of the keyword "account" or "accounts" were found in statements. The keyword-in-context list showed that cash withdrawals were made from accounts of individuals and companies. Three mentions of the keyword "bank" were identified in the coded text segments. Lastly, some judges suggested the timing of cash withdrawals to be of some importance. Three mentions of the keyword "day" or "days" were counted. Here, the keyword-in-context list established that judges, for those cases, detailed how offenders withdrew most cash either the same day or shortly after the money was deposited into their bank accounts.

4.4 Discussion

The main objective of this chapter has been to identify the central money laundering stages and methods of the crime event. To that end, code and word frequencies were calculated for 1,364 quasi-sentences derived from full judgement transcripts of the Court of Appeal and Administrative Courts of England and Wales (1997-2017). The following pages outline the discussion of the 11 key findings and the strengths and limitations of this analysis.

4.4.1 Key Findings

There are 11 key findings of this code and word frequency analysis. The code and word frequency analyses uncovered money laundering stages and methods for the crime event that are not covered in the standard three-stage model. First, offenders deliberately *convert* criminal proceeds. The three-stage model assumes that money laundering ends with the integration of criminal proceeds into the legal economy. An unexpected finding of the present enquiry was that money laundering did not end after offenders had spent crime profits the first time. For some quasi-sentences, the word frequencies indicated that offenders would pay for vehicles with criminal proceeds only to sell them shortly afterwards. Such deliberate and prompt conversion during money laundering puts into doubt the idea of integration as the final stage of the money laundering process. The academic literature contains some evidence that deliberate conversions to disguise the criminal origin of proceeds are part of money laundering. For instance, Petrunov (2011, p. 180) has observed similar practice for human traffickers in Bulgaria, where offenders use their funds to purchase, export, and resell a wide range of goods for the purpose of money laundering. Even though this money laundering stage remains

underexplored, deliberate conversions of criminal proceeds raise doubts about integration as the final phase during money laundering.

Second, offenders *export* criminal proceeds. The three-stage model does not take into account the location where money laundering takes place. Critics have therefore argued that the sequence of placement, layering, and integration ignores the deliberate attempt of criminals to move criminal assets to other jurisdictions (Soudijn, 2016; van Duyne, 2003; van Duyne & Levi, 2005). Similarly, this chapter's code and word frequency counts suggest that offenders do indeed move criminal assets abroad. Quasi-sentences contained statements where judges reported how offenders use bank transfers and foreign currency smuggling to export criminal funds. These methods are worth mentioning since the field of money laundering stresses only the importance of cash smuggling for moving funds internationally (He, 2010; Irwin et al., 2012; Kleemans et al., 2013; Riccardi & Levi, 2018; Unger, 2007). As such, the findings offer a more nuanced view of the exportation of criminal proceeds.

Third, offenders *spend* their criminal assets. For the three-stage model, integration marks the end of the money laundering process, where the now unsuspicious criminal proceeds are spent or invested in the legitimate economy (Irwin et al., 2012, 2014; Petrunov, 2011; Soudijn, 2010, 2012, 2016; Teichmann, 2017; van Duyne, 2003; van Duyne & Levi, 2005). However, the results of this chapter indicate that offenders prefer spending over investing criminal assets. Typically, offenders bought various goods and services, including foreign currencies, property, and cars, using cash or banks, cheques, and debit cards. Investments in businesses were not observed. Altogether, these findings suggest that spending criminal assets to fulfil current needs is chosen over investments for future gains. The results are complementary to the academic literature that has primarily focused on studying offenders'

investments from various perspectives. For example, a body of literature has focused on organised crime infiltration of legal businesses where investments are made to take control of companies (Riccardi, 2014, 2022; Riccardi & Berlusconi, 2016; Savona & Riccardi, 2018). In addition, Kruisbergen et al. (2015) examined 1196 individual investments by Dutch criminals, observing investments into familiar and tangible assets like residences and other real estate and small companies.

Fourth, offenders *prepare* for money laundering. From a conceptual standpoint, money laundering begins with the introduction of criminal proceeds into the financial system. Notably, criminal behaviour before or between the money laundering stages outlined in the three-stage model is not considered. However, the academic literature has already established the existence of preliminary or intermediate steps. For example, Soudijn (2012, p. 150) examined 22 money laundering cases and concluded that financial facilitators carry out tasks before the actual placement of criminal assets occurs. Likewise, Soudjin (2016, p. 299) pointed out that where such intermediate or preliminary steps are considered in the analysis, they are summarised in a preliminary stage. Along similar lines, the findings of this chapter suggest the existence of preparational or intermediate steps of money laundering. The code and word frequency counts returned quasi-sentences describing offenders' interactions with financial accounts, cash, and automobiles that can be best summarised as making arrangements for money laundering. For example, quasi-sentences outlined how bank accounts were explicitly set up for money laundering purposes. Moreover, court records informed about how offenders would remove bagged money from the trunk of a vehicle prior to the actual cash handover. One unexpected finding was that court transcripts also outlined offender communication, face-to-face or via phone, to organise the money laundering operation. Overall, tasks in the preparation of money laundering were a recurring element of the crime event.

Fifth, offenders aim to *justify* the possession of criminal assets. The three-stage model has been criticised for not capturing methods to equip criminal assets with a false legitimate origin (Gelemerova, 2011; Petrunov, 2011; van Duyne, 2003; van Duyne & Levi, 2005; van Koningsveld, 2013). In line with these critics, this code and word frequency analysis covers evidence pointing to money laundering practices where offenders aim to create a false legitimate origin for criminal assets. These quasi-sentences reported offenders' use of false paperwork as the primary tactic, including documents to falsify employment status, income, invoices, fictitious number plates, service manuals, and registrations for stolen cars. Notably, the observed attempts to justify criminal proceeds were not limited to monetary assets but also included non-monetary gains. The observations indicate a blind spot in the current debate, focusing on monetary assets as the primary subject of money laundering (van Duyne et al., 2018, p. 94).

Sixth, offenders do *layer* criminal assets. In the three-stage model, layering is where the criminal proceeds are believed to lose their illegal origin through a series of financial transactions (Irwin et al., 2012, 2014; Petrunov, 2011; Soudijn, 2010, 2012, 2016; Teichmann, 2017; van Duyne, 2003; van Duyne & Levi, 2005). Like the three-stage model, the code and word frequency analysis entailed quasi-sentences depicting how criminals move illegal funds inside the financial system. Typically, the analysed text segments suggested the use of bank transfers. Judges occasionally mentioned how offenders initiate wire transfers using payment orders such as cheques or bank drafts. Regardless, the layering methods identified in this chapter were more straightforward than the academic literature would suggest. Money laundering research has related the layering stage with various methods. To illustrate, Irwin et al. (2012) reported offenders using cheques, fake invoices, insurance market, shell companies, trusts, and underground banking for layering. Teichmann (2017) found layering to entail

utilising antiquities, art, consultancy firms, gold, and jewellers. Potential factors causing such diverse findings may include different definitions, operationalisations, and realities reflected in data.

Seventh, offenders *change owners* of criminal proceeds constantly. In the three-stage model, neither placement, layering, nor integration captures the ownership of criminal assets. However, critics of the model have offered empirical evidence that offenders deliberately change the nominal owner of criminal proceeds to shield the actual controller (van Duyne, 2003; van Duyne & Levi, 2005). In the same manner, this code and word frequency analysis found evidence in support of this criticism. Almost 20 percent of quasi-sentences in court transcripts described changes in the nominal ownership of criminal assets. Here, judges frequently mentioned bank transfers to retail and business accounts and cash handovers as the primary methods of ownership disguise. In the scientific literature, the individual methods to mask ownership are typically discussed independently from the three-stage model. For example, studies examined how offenders exploit companies and corporate vehicles as a shield for criminal activities (He, 2010; Jancsics, 2017; Lord et al., 2018, 2019; Lord & Levi, 2017; Riccardi & Savona, 2013). Previous research has also considered the role of lawyers, family, and friends in camouflaging money laundering (Benson, 2020; Lankhorst & Nelen, 2005; Malm & Bichler, 2013; Soudijn, 2010, 2012, 2014). To a lesser extent, the academic literature addressed cash handovers only in the broader context of cash as a facilitator for money laundering (N. Gilmour & Ridley, 2015; Riccardi & Levi, 2018; Soudijn, 2016; Sterling, 2015; Whisker & Lokanan, 2019), cash handovers only briefly being mentioned (van Duyne, 2007, pp. 69–70). Altogether, disguising who controls criminal assets represents an essential element of money laundering, which is not covered in the three-stage model.

Eighth, offenders *place* illegal proceeds into bank accounts. For the three-stage model, money laundering starts with offenders placing criminal assets in the financial system. Likewise, the code and frequency analysis of quasi-sentences in this chapter found evidence for the placement of criminal funds. Predominately, judges mentioned cash deposits. Less frequently, there were mentions that offenders would pay notes into several bank accounts at once to shield their activities, a method commonly referred to as "smurfing" or "structuring" (Chelliah & Prasad, 2017; Irwin et al., 2012; Reuter & Truman, 2004; S. Schneider, 2004; Unger, 2007, 2017). In contrast, previous money laundering research has associated many money laundering methods with the placement stage. For example, Irwin et al. (2012, pp. 94–95) mentioned smurfing and using stolen identities, currency smuggling, gambling, and casinos. The large number of placement methods mentioned in the literature showed little overlap with the findings of this code and frequency analysis in this analysis.

Ninth, offenders *store* criminal assets. The three-stage model has been criticised for suggesting a level of sophistication for money laundering that is only sometimes supported by empirical evidence. For instance, Levi and Soudijn (2020) have argued that despite illustrative examples of offenders exploding banks, trusts, and offshore tax havens, money laundering is sometimes relatively simple. Analogously, the code and word frequency analysis suggests a new money laundering stage, where offenders store their criminal assets by simple means. Here, quasi-sentences frequently outlined cash storage at the offenders' home addresses and money in bank accounts. Less often, judges mentioned how illegal cash was stored with other crime-related items such as documents, drugs, and counting machines. These findings are in stark contrast to current money laundering research, where the storage of criminal funds is typically discussed as part of the other money laundering stages. For example, Reuter and Truman (2004) saw cash stockpiling as a precursor of bulk cash smuggling across borders.

Likewise, Petrunov (2011, p. 179) mentioned cash stockpiling to accumulate funds from human trafficking before moving sums to another country. Finally, van Duyne (2003, p. 86) observed that criminals would store illegal gains in bank accounts after successfully placing funds in the financial system. Due to the sheer volume of quasi-sentences outlining this criminal behaviour, storing illicit proceeds was considered a separate money laundering stage of the crime event.

Tenth, offenders *transport* criminal assets domestically. In the three-stage model, physically moving criminal funds is not considered essential, as it is neither a money laundering stage nor a method. The scientific literature references the method of moving cash abroad but not the physical transportation of criminal assets within countries. For instance, Irwin et al. (2012, p. 94) saw currency smuggling into less regulated jurisdictions as a distinct method during placement. Regardless, the findings of this chapter suggest the physical transportation of criminal assets as a separate money laundering stage. Quasi-sentences outlined how offenders would physically move assets on foot or by car from one location to another. Unlike the exportation of criminal funds abroad, these physical transports took place domestically. One explanation might be that specific locations within a country offer better conditions for money laundering. This interpretation is supported by the study of Savona and Riccardi (2017). They assessed the money laundering risk across the 43 police areas in England and Wales and found the City of London with the highest risk, which may contribute to criminals moving their funds to London.

Eleventh, offenders aim to make criminal money *untraceable*. The three-stage model portrays money laundering as a crime that mainly takes place inside the financial system. However, some critics have argued that money laundering can entail the reverse process, where offenders remove criminal proceeds from the financial system (van Duyne, 2003; van Duyne

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& Levi, 2005). The findings of this code and frequency analysis support this criticism. Quasi-sentences occasionally covered cash withdrawals of offenders that would ultimately break the paper trails. An unexpected finding was that some criminals timed their cash withdrawals. In a few instances, quasi-sentences entailed keywords which suggest that offenders deliberately withdrew cash from accounts shortly after they had received the funds in their accounts. A potential explanation may be that offenders wanted to avoid the criminal assets being frozen in bank accounts and losing access.

As a final remark, the analysis provides some clarity about money laundering methods. In this thesis, methods have been defined as the instruments to achieve the goals at given stages of money-laundering crime events. The code and word frequency analysis showed that money laundering methods are plentiful. However, the word frequency analysis returned keywords best summarised as products and services such as bank accounts, cash, cars, and wire transfers. Based on these findings, money laundering methods can be understood as products and services used to achieve the goals at a given stage of money-laundering crime.

4.4.2 Strengths and Limitations

There were strengths in the conceptualisation of the problem, the methodological approach adopted, and the new evidence found in this chapter. Conceptually, the kind hierarchy of money laundering is a new approach to clarifying the relationship between standard concepts and terms used throughout the scientific literature. The kind hierarchy enables researchers to be explicit about the distinct parts of the money laundering phenomenon under investigation. Methodologically, the code and word frequencies are a new method for analysing textual information on money laundering. Adopting code and word frequencies

enables uncovering text properties in a replicable manner and offers a transparent approach to data analysis which is new to the study of money laundering. Empirically, the chapter gives new insights into money laundering in England and Wales. Evidence found in full judgment transcripts from the Court of Appeal and the Administrative Court of England and Wales outlined money laundering as a multifaceted phenomenon involving many stages and methods not accounted for in the standard three-stage model.

Limitations of this enquiry are the reliance on human judgment and a potential sample bias. First, human judgment might reduce reliability. The endogenous unitising procedure of this content analysis to define the textual units of analysis was based on human judgment. Handpicked text segments are considered extremely valid because researchers decide whether text pieces are relevant to the analysis. However, the disadvantage of relying on human judgment is that the selection process is hard to reproduce and potentially less reliable (Däubler et al., 2012, pp. 939–941). Furthermore, human coding was used to categorise relevant text segments because it is usually deemed more accurate and feasible in highly unstructured textual data. Nonetheless, human coding is thought to be less replicable than computational coding (Alonso et al., 2012; Conway, 2006; de Graaf & van der Vossen, 2013; Grimmer & Stewart, 2013; Lacy et al., 2015; Lewis et al., 2013; Mikhaylov et al., 2012). To ensure the reliability of this study, unitising and coding procedures were repeated and refined over three years. Additionally, reliability tests were used for the unitising process, showing a high level of replicability.

Second, the sample of this content analysis may not be representative. The sample entails all court transcripts from the online archive Casetrack that hold at least one quasi-sentence. However, when the sample was drawn, information on the existing population of

texts was missing. In particular, there was uncertainty as to whether Casetrack stored all transcripts from the Court of Appeal and Administrative Court of England and Wales that hold quasi-sentences or just a selection. Since Casetrack was discontinued at the beginning of 2017, there was no opportunity to request this information directly from the service providers. Subsequently, the samples were drawn from more than 80,000 court documents without knowing whether the sample was representative of all court transcripts. The potential unrepresentativeness of the sample was mitigated by avoiding any inferences about the general population of money laundering incidents portrayed in other court transcripts.

4.5 Conclusion

In this chapter, money laundering stages and their methods were conceptualised as the central building blocks of the crime event. Code and word frequency counts were computed for text segments identified in full judgment transcripts from the Court of Appeal and Administrative Court of England and Wales. Eleven money laundering stages and related methods were identified. By way of comparison, the standard three-stage model only considers placement, layering, and integration to constitute the money laundering process, where most properties of money laundering-crime events are not captured. Accordingly, this chapter presents a new perspective on how money laundering works beyond the confines of the three-stage model. In the next chapter, the viewpoint on money laundering is extended further by exploring the criminogenic properties of the immediate environment.

Chapter 5:

Proximal Circumstances

Money laundering research has stressed the importance of the criminogenic environment. Most commonly, the academic literature has focused on ecological factors at the macro level. For instance, Vaithilingam and Nair's (2007) empirical analysis of data from 88 countries indicates that a legal framework with good corporate governance and high-innovative capacity lowers the pervasiveness of money laundering. Moreover, Savona and Riccardi (2017) explored the money laundering risk based on composite indicators across geographic areas and business sectors in Italy, the Netherlands, and United Kingdom. To a lesser extent, there have been studies on situational factors at the micro-level. For example, Reuter and Truman (2004) examined if the crime types generating the illegal proceeds affect the use of methods, suggesting a greater variety of ways for the profits of drug traffickers and other smugglers. Furthermore, Irwin et al. (2012) analysed 146 money laundering typologies and found that the number of money laundering techniques employed by criminals changed with the amount of money being laundered. With the criminogenic environment, the academic literature has extended the scientific debate beyond the money-laundering crime event.

However, environmental factors are not considered in the three-stage model. The failure to incorporate environmental features into the three-stage model has negatively affected the understanding of how money laundering works. Effectively, ecological characteristics that potentially facilitate money laundering are excluded from the analysis. For example, Soudjin (2016) criticised that from a conceptual perspective, little attention has been paid to efforts by offenders to move money into countries that offer more favourable conditions. Ignoring the

environment in which money laundering occurs, the three-stage model has created a conceptual blind spot where crime-facilitating properties are not considered.

In stark contrast, this thesis considers the criminogenic environment of money laundering. The crime science literature is used as a starting point, where the interaction between offenders and their environments is thought of as the cause of criminal behaviour (Clarke, 2004; Cockbain & Laycock, 2010; Wilcox & Cullen, 2018; Wortley et al., 2019; Wortley & Mazerolle, 2008). The offender-situation interaction is conceptualised as *proximal circumstances* (Ekblom, 1994, pp. 198–211) and modified to better reflect the criminogenic environment of money laundering. In its modified version, the proximal circumstances of money laundering comprise the key components of predicate crime, potential offender, and situation. Together, the components stand for the immediate environment in which money laundering occurs. Accordingly, this chapter's main objective is to identify the properties that make the proximal circumstances of money laundering.

Word frequencies are used to identify proximal circumstances in text. Analogous to the previous chapter, relevant quasi-sentences found in full judgment transcripts of the Court of Appeal and Administrative Court from England and Wales are analysed. All quasi-sentences in sample 1 holding information about the proximal circumstances are examined using word frequency counts to identify recurring words that indicate essential criminogenic properties. For ambiguous terms, keyword-in-context lists were produced to understand the term's meaning. Using the word frequency counts for relevant quasi-sentences enables the properties of the proximal circumstances to be isolated. For this reason, the present chapter stands for the natural continuation of the previous analysis focusing on the crime event.

Original contributions of this chapter are conceptual and empirical. From a *conceptual perspective*, this chapter applies the paradigm of proximal circumstances to money laundering. The conceptual framework describes the central environmental components surrounding money laundering and the assumed mechanism at play. From an *empirical perspective*, the chapter sheds light on the predicate offences, offenders, and situation that are hardly discussed in the current literature.

This chapter is organised as follows: Section one covers the literature review of work done in crime science to conceptualise the offender-situation interactions as proximal circumstances and modifications to the original paradigm to better reflect money laundering. Section two entails the methods, including sample and data analysis procedures, to identify the proximal circumstance of money laundering. Section three outlines the results of the word frequency analysis of text segments found in court transcripts detailing contextual information about money laundering offences. Section four entails the discussion of the key findings through the lens of the proximal circumstances of money laundering as well as the strengths and limitations of the present exploration.

5.1 Literature review

In this section, the proximal circumstances of money laundering are conceptualised. In recent years, the environmental factors associated with money laundering have gained prominence in the scientific literature. For example, Levi and Soudijn (2020) outlined four factors external to the crime event that, depending on the circumstances, may affect how organised criminals launder money:

In our framework, we distinguished four important factors (type of crime, revenue, goals, and AML regime) that influence the level of complexity of money laundering in relation to organized crime[…] Depending on the circumstances of the four factors put forward in our framework, money laundering can be carried out in more or less complex ways. (Levi & Soudijn, 2020, pp. 620–621)

Likewise, in his conceptual paper, Paul Gilmour (2022) advocates expanding the view from the money laundering behaviours to its environment:

Rather than only considering the simple "what" or "how" of money laundering, incorporating the "who" and "where" is key to the global fight against money laundering[…] Understanding the actors and spaces connected with money laundering is, arguably, as important as how the offence is defined in criminal law. (P. M. Gilmour, 2022, p. 8)

While acknowledging the importance of situational factors, the scientific community has yet to clarify the relationship between money laundering and its environment.

Crime science was used as the overarching framework of this thesis to conceptualise the environment in which money laundering occurs. From the crime science perspective, criminal behaviour is caused by the interaction between motivated offenders and their environments (Clarke, 2004; Cockbain & Laycock, 2010; Wilcox & Cullen, 2018; Wortley et al., 2019; Wortley & Mazerolle, 2008). However, crime science has heavily been influenced by a series of publications appearing in the early 1970s in the emerging field of environmental criminology (Wortley et al., 2019, p. 2). Brantingham and Brantingham (1991, p. 7) defined environmental criminology as the analysis of the place in time and space where a crime occurs. Today, environmental criminology is an established branch of criminology characterised by

publications with a shared interest in criminal events, with the underlying theories having influenced the development of crime science (Wortley et al., 2019, p. 11). This section is organised as follows: First, the crime science perspective is summarised by considering the underlying theories from environmental criminology. Second, the proximal circumstances of money laundering are being conceptualised.

5.1.1 Crime Science

Crime science is the application of scientific methods from different academic disciplines for crime reduction, building on theories from environmental criminology. In environmental criminology, the physical and social attributes of streets, districts, cities, and even countries can increase the likelihood of crime occurrence. For instance, Bruinsma and Johnson (2018) outlined the research in environmental criminology to focus on the spatial distribution of criminal events:

> [C]riminologists active in the field of environmental criminology are particularly interested in the crime event. They are interested in the spatial distribution of crime, victimization, or offenders in society. They want to know whether there are differences in the distribution of crime, victimization, or perpetrators across cities, neighborhoods, or smaller units of analysis, such as street segments—and, if this is the case, how and why this is so. The physical and social characteristics of these spaces are seen as having the potential to explain differences in the distribution of crime. (Bruinsma & Johnson, 2018, p. 3)

With the aim of understanding the attributes that can explain the spatial distribution of criminal events, the various approaches and concepts from environmental criminology have been crucial for the development of crime science.

Theoretical advances in environmental criminology have laid the foundation for crime science. Wortley et al. (2019, p. 3) provided a chronology of six theoretical approaches from environmental criminology that have been important for the development of crime science:

1) The concept of *crime prevention through environmental design* by Jeffery (1969, 1971) marks a critical shift in criminology, in which it is argued that effective crime prevention should not be focused on treating the offender after the offence has been committed but on making crimes impossible before they are committed by altering the physical environment. Wortley et al. (2019, pp. 3–4) considered the ideas formulated in crime prevention through environmental design as the blueprint for crime science.

2) Equally important to the development of crime science is the concept of *defensible space* by Newman (1972), who argued that crime results from cities' anonymity and social fragmentation, which can be prevented by designing buildings, streets, and open spaces. For Wortley et al. (2019, pp. 4–5), the concept of defensible space emphasises the importance of the immediate environment as a cause of crime. It offers actionable principles for urban design to prevent crime.

3) Similarly, a significant contribution that influenced the development of crime science was the concept of *situational crime prevention*. Clarke (1980) made the case that crime only occurs when there is an opportunity. Based on this viewpoint, crime prevention methods should either aim to decrease crime opportunities or raise the likelihood of offenders getting caught. Wortley et al. (2019, pp. 5–6) regarded situational crime

prevention as the extension of Newman's practical crime prevention guide not limited to urban design since it aims at any situational opportunity of crime or related to physical security and lack of surveillance (Mayhew et al., 1976, pp. 6–7).

4) Likewise, the *routine activity approach* by Cohen and Felson (1979) has been considered a crucial concept for crime science. The idea was that social changes increase the likelihood that offenders come together with potential targets without capable guardians, leading to higher crime rates (L. E. Cohen & Felson, 1979, pp. 592–594). Wortley et al. (2019, pp. 6–7) noted that the routine activity approach complements the situational crime prevention approach by specifying the intervention points for crime prevention (offender, target, guardian).

5) Additional concepts considered significant for developing crime science are *the geometry of crime* and *crime pattern theory* by Brantingham and Brantingham (1991; 1993), who argued that crime is not randomly distributed in time and space but clustered depending on where people live, how and why they travel, and the individuals with whom they interact (P. J. Brantingham et al., 2017, p. 112). According to Wortley et al. (2019, pp. 9–10), the concepts of geometry of crime and crime pattern theory allow the locations of crime to be detailed, complementing the routine activity approach, which assessed changes in crime rate at the societal level.

6) Finally, with the *rational choice perspective*, Cornish and Clarke (1985) introduced a decision-making model central to today's crime science perspective. The central argument of Cornish and Clarke (1985) is that the commission of crimes is not the result of psychological or social dispositions but rather the result of offenders' choices, which is critical for developing effective crime control measures. Following Wortley et al. (2019, pp. 10–11), the rational choice approach was adopted primarily to provide a

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rationale for situational crime prevention that can be readily communicated to practitioners.

Environmental criminology has laid the theoretical foundation for crime science with advances in understanding those features of the immediate surroundings that can explain the spatial distribution of criminal events.

Despite sharing the same theories, crime science is different from environmental criminology. Wortley et al. (2019) have described the scope of crime science as the main difference between the disciplines:

> the development of crime science has been strongly influenced by the theories and methods pioneered in environmental criminology. Accordingly, much of the research that we might label crime science has focused on the crime event as the prime source of data and on situational strategies as the preferred type of intervention. However, crime science is more inclusive than that. Any factor that is found to be a cause of crime, and any intervention that leads to a reduction in crime, is fair game for crime scientists. (Wortley et al., 2019, p. 13)

The crime science perspective offers a broader approach compared to environmental criminology by considering a more comprehensive range of environmental factors that can contribute to crime and be targeted for crime prevention efforts. The differences must be considered when conceptualising the relationship between crimes and their immediate environments.

Two requirements need to be met in this thesis to conceptualise the immediate environment of money laundering. First, the theoretical framework should allow for investigations on a micro level. Environmental criminology theories capture crime patterns at

three spatial levels of aggregation: macro (countries, states, cities), meso (districts, police precincts, blocks), and micro (building types, landscaping, lighting) (P. J. Brantingham & Brantingham, 1991, pp. 21–22). However, the primary data source of this thesis, court transcripts, mainly contains information about money laundering on the micro level. Therefore, a theoretical framework enabling micro-level analysis is necessary. Second, the theoretical framework for the immediate environment of money laundering needs to consider features beyond the criminal event. Money laundering always follows another crime, known as predicate crimes or predicate offences. These initial criminal activities generate the assets that are subsequently laundered, and their characteristics are believed to impact the process of money laundering (Bell, 2002; Levi & Reuter, 2006; Reuter & Truman, 2004; Schott, 2006; Unger et al., 2006; van Duyne et al., 2018). Hence, the environment influencing money laundering includes situational factors not directly linked to the criminal event. Meeting both criteria was crucial in selecting the theoretical framework for conceptualising the immediate environment of money laundering in this thesis.

The existing publications critical to the development of crime science are not enough to fully understand the immediate environment of money laundering. There are three reasons for this. First, many concepts focus on crime patterns at higher levels of spatial aggregation. For instance, the routine activity approach examines how societal changes affect crime patterns at a macro level. Similarly, concepts like defensible space and crime pattern theory explore neighbourhood attributes and their impact on crimes, which are considered meso-level approaches. Since these approaches concentrate on studying offences at larger spatial scales, they are less suitable for understanding the immediate environment of money laundering at the micro level. Second, the micro-level approaches that have shaped crime science are more concerned with crime prevention rather than understanding the actual commission of a crime.

Situational crime prevention and the rational choice approach are concepts used for crime prevention. Situational crime prevention provides a set of principles to prevent specific offences. At the same time, the rational choice approach analyses the decision-making process leading to criminal behaviour and identifies intervention points for crime prevention. However, the specific situational factors and their interplay affecting the likelihood of crimes occurring are not detailed (Clarke, 2017; Cornish & Clarke, 2017). Since these micro-level approaches primarily focus on preventing crimes, they are also less suitable for understanding the immediate environment of money laundering. Third, the environmental criminology theories underlying crime science mainly focus on situational factors near the crime event. For example, the concept of defensible space considers the physical design of neighbourhoods as a situational feature that can either increase or inhibit control over a space, thus influencing the likelihood of crimes occurring (Armitage, 2017, p. 262). Because these approaches primarily focus on factors related to the physical and social environment close to the criminal event, they are considered less suited for capturing features beyond the immediate crime event.

To conceptualises the person-situation interaction during money laundering from the crime science perspective, the paradigm of proximal circumstances by Ekblom (1994) was deemed ideal for five reasons: First, the paradigm of proximal circumstances represents a continuation of concept crucial to the development of crime science, extending the scope of conceptual frameworks such as routine activity approach, crime pattern theory, and rational choice approach (Ekblom, 1994, p. 196). Second, the paradigm of proximal circumstances captures crime patterns at the micro-level (Ekblom, 1994, p. 208), which aligns with the level of spatial aggregation for money laundering offences reported in court transcripts as the primary data source of this thesis. Third, the paradigm of proximal circumstances distinguishes between crime-causing mechanisms that are proximal and those that are distal to the criminal

event (Ekblom, 1994, p. 195). Accordingly, situational factors beyond the crime event can be incorporated into the analysis. Fourth, the paradigm of proximal circumstances has been used to study different types of crime. Here, the distinction between proximate and distal causes of crime has informed work on different crimes, such as terrorism and poaching (Moreto, 2019; Perry et al., 2017). Fifth, the paradigm of proximal circumstances was deemed an adaptable analytical framework for the chosen data source, conceptualising essential properties from the crime-causing person-situation interaction (Ekblom, 1994, pp. 199–206). In contrast, alternative micro-level frameworks, such as the conjunction of opportunity framework (Ekblom, 2001) or the crime script approach (Cornish, 1994) enable more detailed analyses but require more extensive data. The paradigm of proximal circumstances and its implications for money laundering are discussed in more detail in the following pages.

5.1.2 Proximal Circumstances

In the paradigm of proximal circumstances, crimes are the product of mechanisms. Central to this understanding of the offender-situation interaction is the distinction between two kinds of causal mechanisms of crime[4]. First, proximal mechanisms are directly linked to distinct criminal behaviours in time and space. Second, there are *distal mechanisms* of crime that connect to the criminal activity only indirectly through the proximal causes they precede (Ekblom, 1994, pp. 195–196). The paradigm focuses on the proximal mechanisms leading up to the crime that unfolds where motivated offenders and situations meet. The offender, the

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[4] Ekblom (1994) defined the *causal mechanism of crime* as follows: "anything (any process or condition) that by its presence or absence or its particular state affects the probability of a criminal event occurring, whether alone or in conjunction with other such mechanisms. Mechanisms are linked together in chains of cause and effect" (Ekblom, 1994, p. 194).

situation, and the mechanisms that unfold in conjunction constitute the proximal circumstances of criminal behaviour.

Proximal circumstances can be further specified. Ekblom (1994, pp. 199–206) distinguishes between five subcomponents related to offenders and situations, including the mechanisms that, in conjecture, lead to criminal behaviour, as illustrated in Figure 23. *Potential offenders* bring programmed potential and their current state that may lead to criminal behaviour in conjuncture with particular situations. The programmed potential is independent of the situation and can be formed through distal developmental processes and genetics. The current state may be best understood as life circumstances such as stress, family conflicts, and money problems that can make crime commission more likely. On the other hand, *the situation* consists of the environment, target, and modulators. First, the environment can be further divided into logistical and motivational environments. The former are physical and social factors that make offending easier or more attractive. The latter increases the motivation to commit crimes independently from offender dispositions. Second, the target of the criminal behaviour can entail both property and person. Here, targets are passive parts of the situation perceived as present, attractive, and vulnerable to offenders. Third, the modulator is an element of the situation that can influence the offender-situation interaction in a manner that makes criminal behaviour both more and less likely. These factors can change the situation before, during, and also after the crime has taken place. To conclude, the proximal circumstances can entail many mechanisms that lead to criminal behaviour, where potential offenders meet favourable situations.

Figure 23

Key Components of the Proximal Circumstances
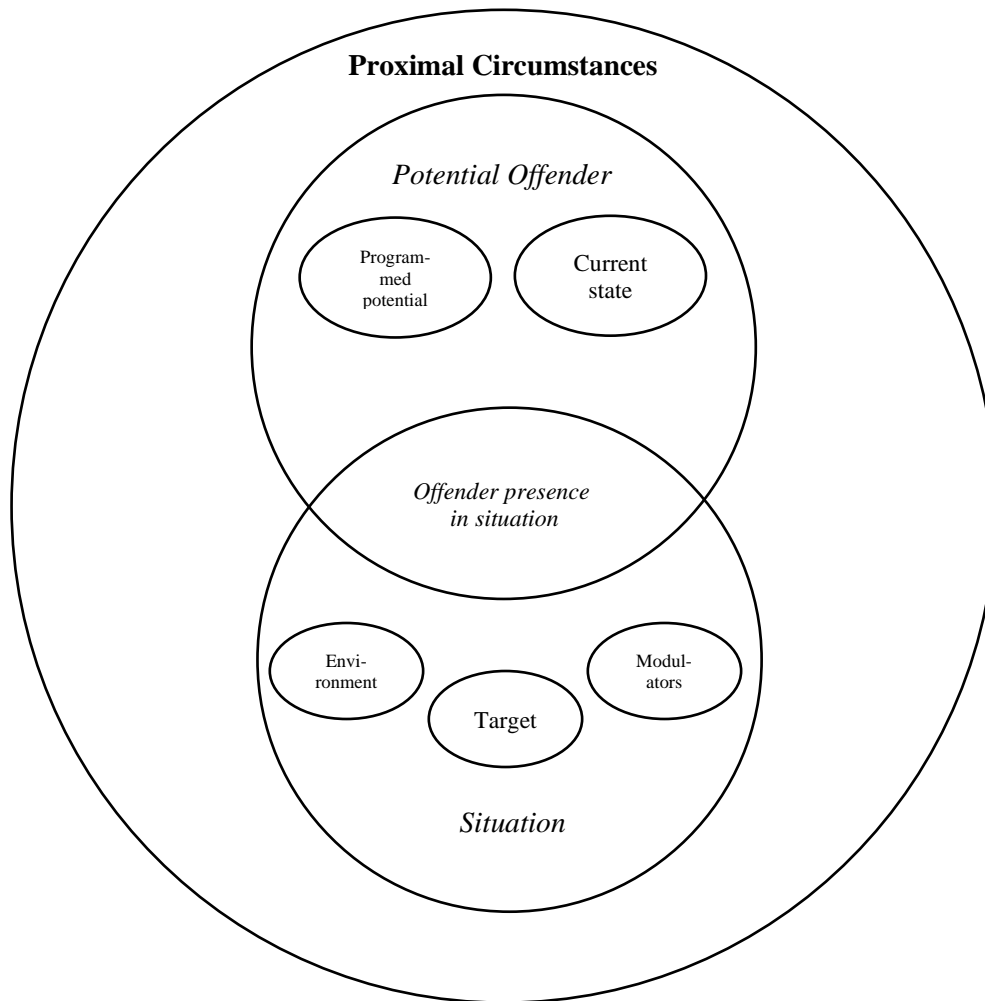
However, the paradigm needs to be modified to better account for money laundering. The offender-situation interaction during money laundering differs in at least one significant way from the paradigm of proximal circumstances. As previously mentioned, money laundering is always a by-product of another crime, the predicate crime or predicate offence, which generates the criminal proceeds for the subsequent laundering (Bell, 2002; Levi & Reuter, 2006; Reuter & Truman, 2004; Schott, 2006; Unger et al., 2006; van Duyne et al., 2018). From an analytical perspective, these predicate crimes can impact both the potential

offender and the situation. On the one hand, predicate offences can affect who commits money laundering. The scientific literature provides evidence that offenders who commit the predicate offence are often also those who launder the resulting criminal assets. For example, Malm and Bichler (2013) examined drug markets in Canada and found that 80 percent of the offenders selling drugs were also involved in the subsequent money laundering operation. Additionally, predicate crimes are believed to impose logistical constraints on the situation and thereby affect how offenders launder their criminal assets. For instance, Levi and Soudijn (2020, pp. 589–593) saw predicate crimes as determining the type and amount of criminal assets, visibility to others, and frequency with which criminal proceeds are generated. To better reflect the offender-situation interaction during money laundering, the paradigm of proximal circumstances required incorporating the predicate crimes.

In this thesis, predicate crimes are key components of the proximal circumstances. The paradigm of proximal circumstances explicitly considers the possibility of criminal events affecting another. Ekblom (1994, p. 208) describes the assumed mechanism of this relationship as follows:

> Events do not of course happen in isolation. It is worth explicitly stating in the paradigm that there may be "feed-forward" from the outcome of one criminal event to those that may follow. In particular, there will be feed-forward to the offender[…] and to other potential offenders. […]There will also be feed-forward to the affected situation. (Ekblom, 1994, p. 208).

Analogously, predicate crimes were understood to be a key component of the proximal circumstances, whose feed-forward processes can affect the potential offender and situation. Figure 24 outlines the proximal circumstances relevant to money laundering, including the

predicate crime, potential offender, and situational factors. The conceptual framework encapsulates the underlying assumptions about the offender-situation interaction for money laundering.

Figure 24

Proximal Circumstances of Money Laundering
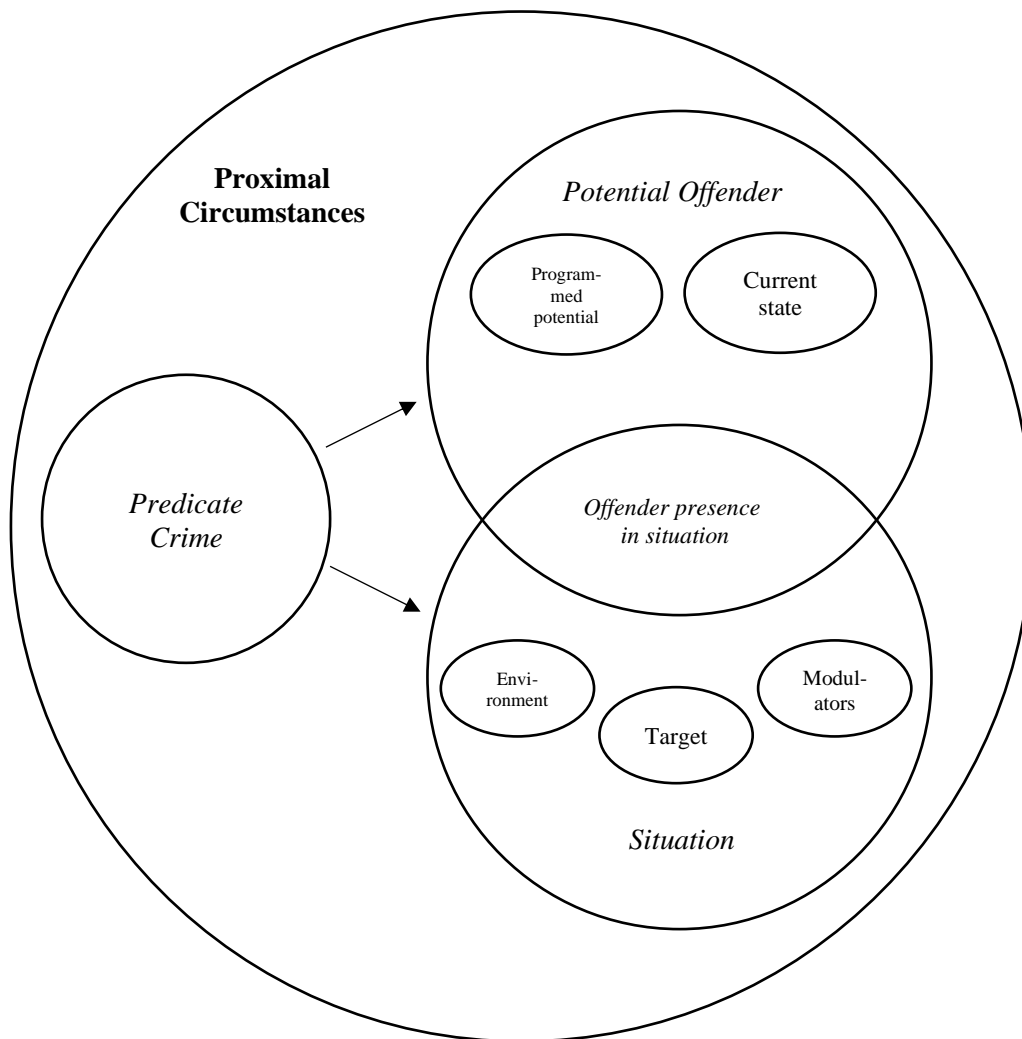
5.2 Method

This section covers the methods to find the proximal circumstances in court records. First, the data from sample 1 utilised for the data analysis is described, comprising 1,364 quasi-sentences from 180 full judgment transcripts (1997-2017) pf the Court of Appeal and Administrative Court of England and Wales. Next, the word frequency analysis procedure used to identify proximal circumstances of money laundering in relevant text segments is outlined.

5.2.1 Sample 1

In this chapter, the quasi-sentences from sample 1 were analysed. The previous chapter entailed the analysis of 797 quasi-sentences containing information about the money-laundering crime event. By way of implication, the quasi-sentences of sample 1, which depicted factors related to the immediate environment, were excluded from the analysis. In contrast, the chapter at hand builds upon the remaining 567 quasi-sentences of sample 1 to identify the properties of the proximal circumstances of money laundering in data. Quasi-sentences with the codes *Circumstances* and *Predicate Offence* are examined. The analysis of quasi-sentences informing about the circumstances and the predicate offence of money laundering completes the analysis of sample 1.

5.2.2 Data Analysis

Cross-case and *within-case strategies* are mixed to identify the proximal circumstances. Table 5 summarises cross-case and within-case logic as the analytical strategy to identify the characteristics of proximal circumstances in quasi-sentences. Analogues to the data analysis in chapter four, all relevant quasi-sentences outlining individual money laundering incidents are

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compared. The rationale of this cross-case strategy was to identify recurring keywords in court records used to describe the proximal circumstances of individual money laundering incidents that may signal essential criminogenic properties. In addition, if the cross-case analysis returns ambiguous meanings, within-case analyses of the money laundering incident are performed to reveal the meaning of keywords. Mixing cross-case and within-case strategies allowed the key components of proximal circumstances to be specified.

Table 5

Cross-Case and Within-Case Strategies: Proximal Circumstances

Analytical Strategy	Purpose	Case Unit	Outcome
Cross-Case and Within-Case Analysis	Identifying the Properties of Proximal Circumstances	Money Laundering Incident	Properties/ Subcodes

Word frequencies were used to identify the proximal circumstances of money laundering. The focus lies on recurring text segments that can indicate essential elements of the environment in which money laundering occurs. Word frequencies were calculated for all 567 quasi-sentences in the sample. Word frequency counts for the 50 most commonly used keywords per code were computed in NVivo 12. Here, word counts refer to the number of times keywords or groups of keywords (sharing the same stem) were mentioned in quasi-sentences of the same code. Additionally, keyword-in-context lists were created where terms appeared to be ambiguous. The Word Tree feature in NVivo 12 was used to compute keyword-in-context lists. The results of the word frequency analysis are reported in the subsequent section.

5.3 Results

Word frequencies were computed for 567 quasi-sentences describing the proximal circumstances of money laundering. Here, 376 quasi-sentences entailed contextual information and 191 quasi-sentences detailed the predicate offence. For each code, the 50 most commonly used keywords were computed. In addition, the word trees were created for ambiguous terms to enable the keyword-in-context analysis. The following pages present the findings of the word frequency analysis for quasi-sentences depicting the proximal circumstance of money laundering.

5.3.1 Circumstances

Word frequencies were computed for 376 quasi-sentences outlining the environments in which money laundering incidents occur. Appendix XIX reports the 50 most frequent keywords used in text of this kind. Coded statements contain a vast range of contextual information, which can be organised into five groups: law enforcement activities to uncover the money laundering offences, criminal assets, time of money laundering, place of money laundering offence, and offenders. First, quasi-sentences detailed the police activities to disrupt money laundering. Fifty-three mentions of the keyword "police" were counted, which was the most frequently used keyword in this code. Forty-four references to "officer", "officers", or "office" were found. Specifically, the keywords "officer" and "officers" referred to police personnel and were mentioned 37 times. In contrast, the unrelated keyword "office", which NVivo 12 inaccurately grouped together with the earlier keywords, was mentioned seven times. Next to mentions of law enforcement, analysed keywords detailed the specific police operations. Twenty-eight references to "arrested", "arrest", or "arrests" were made by judges to depict how police took

offenders into custody. Likewise, judges used the keywords "search" and "searched" 22 times to depict how search warrants were executed. In a few instances, the keyword was used to outline the search of vehicles (R v Ahmet & Akam, 2006; R v Ryan, 2007) and container ships (R v Jokic, 2008) as well as the police making use of their stop and search powers (R v Midgley, 2008; Wahib v Mold Crown Court, 2015). Furthermore, 21 mentions of the keyword "stopped" was found in the coded text. The keyword-in-context analysis illustrated in Figure 25 showed that judges used the word primarily to describe how the police prevent suspicious automobiles from continuing their journey.

Figure 25

Keyword-In-Context: stopped
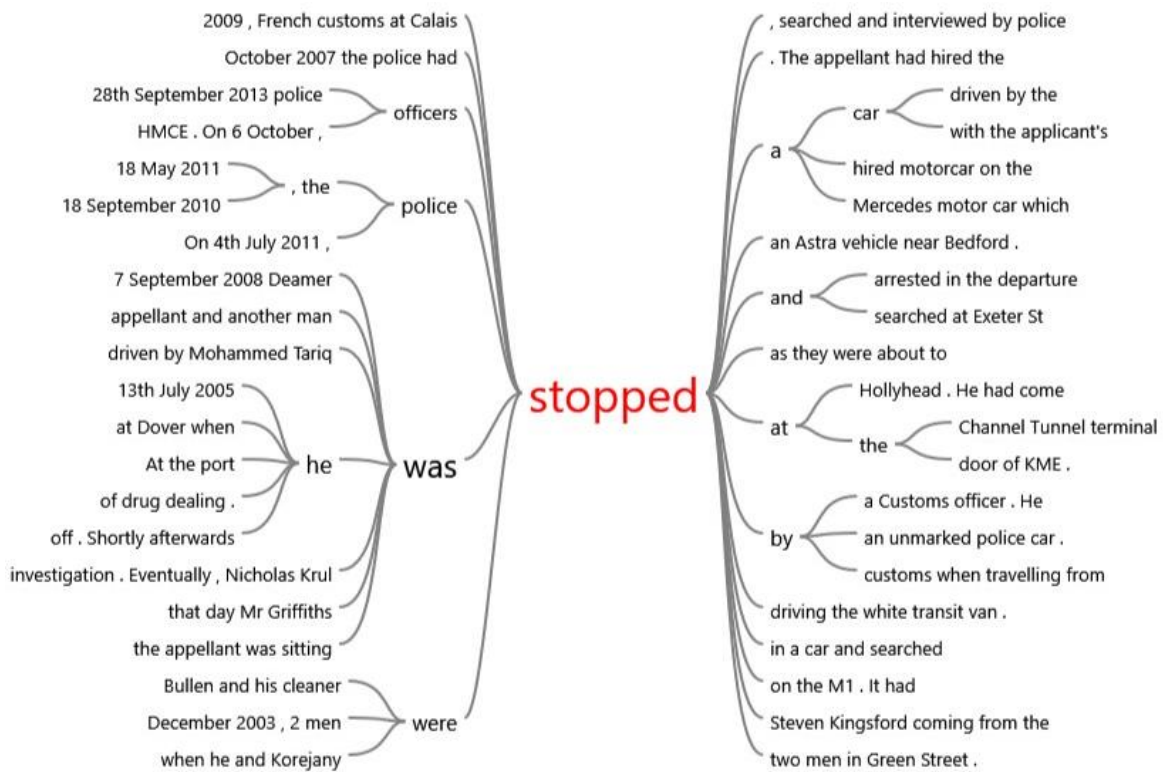
Furthermore, 20 references to the keywords "observed", "observation", "observations", or "observing" were counted. The keyword-in-context analysis outlined in Figure 26 suggests that judges used the word to outline how law enforcement monitored offenders while committing money laundering offences. Lastly, thirteen times, the keyword "customs", "custom", or "customer" were mentioned. Only the first two keywords referred to officers from HM Revenue and Customs, while the latter was used once to describe a customer of a defendant (R v Chowdhury (Iftekhar) (2015)).

Figure 26

Keyword-In-Context: observed
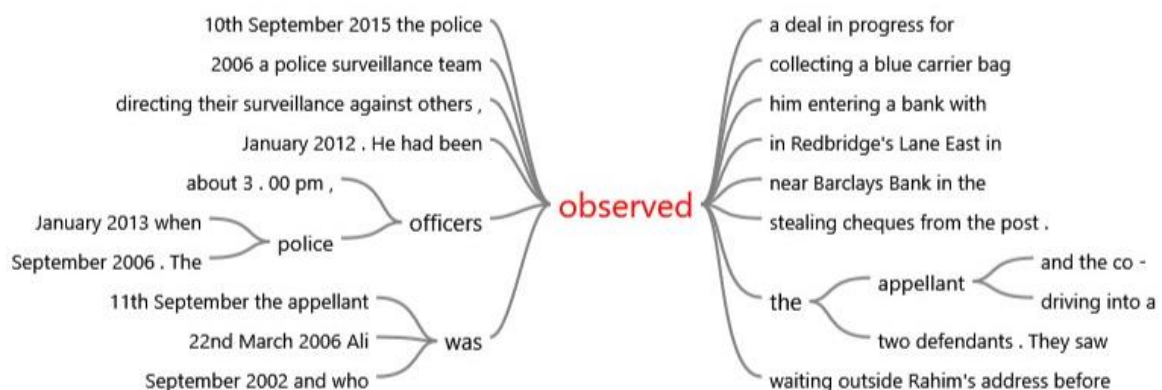
Second, quasi-sentences outlined the criminal asset. The word frequency analysis of quasi-sentences revealed various keywords predominately describing criminal money in different forms. Judges referred to the keyword "cash" in 30 instances to describe criminal assets related to the tried money laundering offence. Likewise, judges referenced the keyword "notes" 17 times. Here, the keyword-in-context analysis illustrated in Figure 27 showed that

judges used the keyword when describing English and Scottish bank notes related to the money laundering offence.

Figure 27

Keyword-In-Context: notes
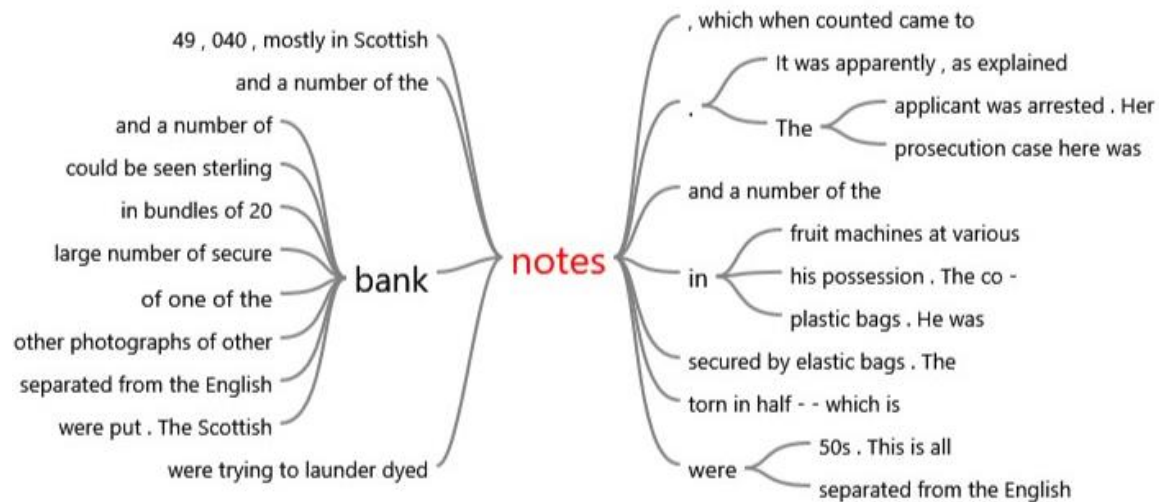
To a lesser extent, judges also used the keyword "money" to outline the criminal asset related to the respective money laundering offence. Indeed, the keyword "money" was counted fifty times in the analysed quasi-sentences. However, the keyword-in-context analysis in Figure 28 showed that judges only partially used the keyword to describe the proceeds of crime. Additionally, judges using the keyword would also refer to money laundering itself and money launderers. Occasionally, the keyword suggested distinct kinds of legitimate businesses involved with the criminal offence, such as money services businesses, money transfer businesses, and money exchange businesses.

Figure 28

Keyword-In-Context: money
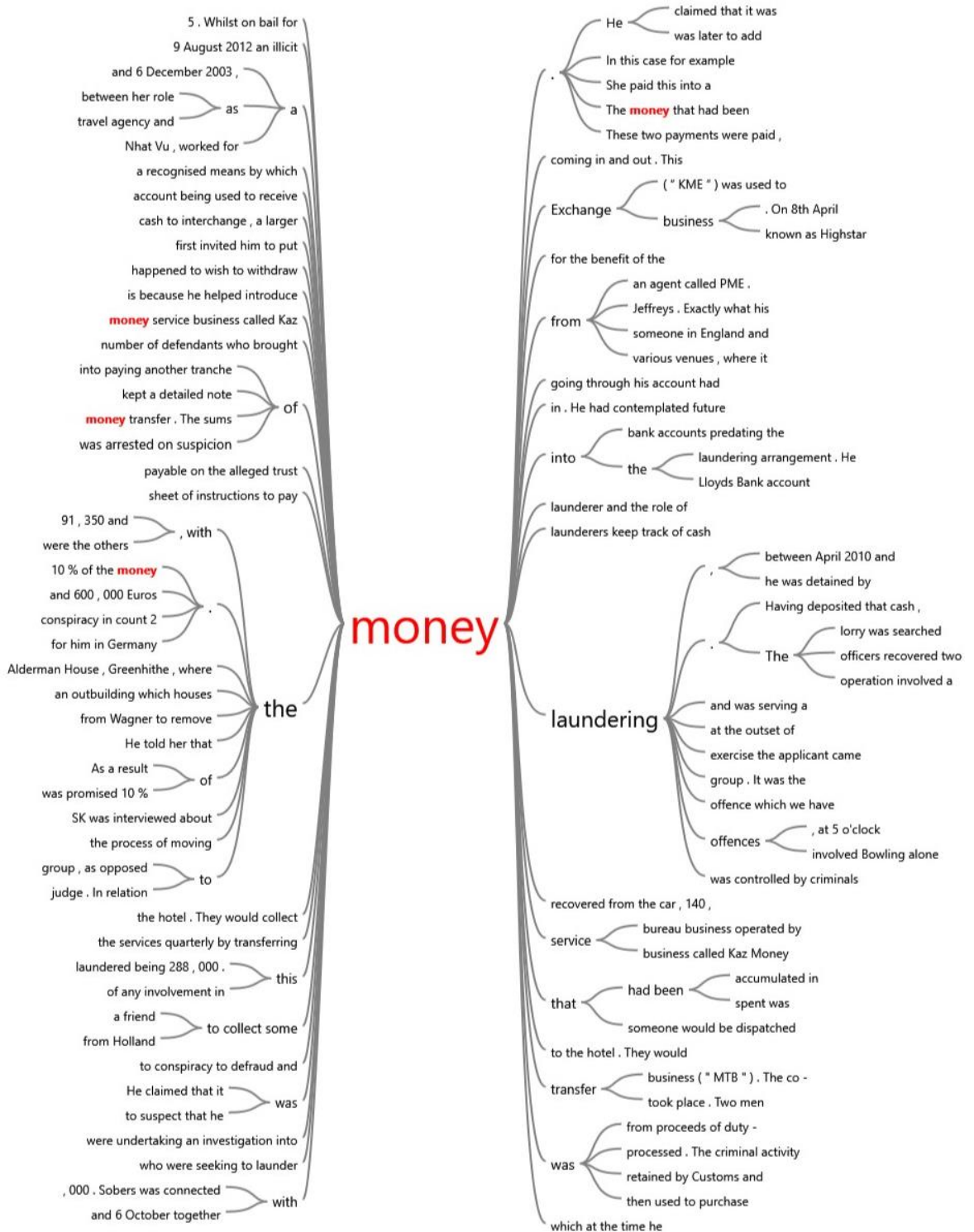
Third, quasi-sentences detailed the temporal dimension of money laundering offences. Judges primarily referred to months and years to clarify when money laundering took place. Thirteen times, judges referred to the year "2011" 13 times. Twelve mentions of the year "2003" were counted in coded text. Eleven remarks to the year "2005" were made. No other years were referenced in the 50 most frequent keywords for these quasi-sentences. Furthermore, another group of keywords outlined the months in which money laundering incidents occurred. The month "October" was counted 22 times. Seventeen remarks about the month "September" were found in the coded text. Judges mentioned the month "February" 15 times. 13 mentioned each of the months "July" and "march". Eleven remarks to the month "November" were counted.

Fourth, quasi-sentences held information about the spatial dimension of money laundering Judges would typically specify where money laundering occurred by naming the city or parts of a city's infrastructure. Court records mentioned money laundering locations all over England and Wales. Nevertheless, London was the only recurring city among the 50 most frequent words. Fifteen references by judges to the keyword "London" were found in quasi-sentences that outlined contextual information. Additionally, quasi-sentences mentioned city features connected to money laundering. Keywords showed money laundering in residential housing, commercial areas, and roads. Specifically, the keywords "home", "address", and "house" were counted 21, 18, and 13 times respectively, primarily to detail where the offenders lived. Moreover, seventeen references to the keyword "business" were counted. The keyword-in-context analysis outlined in Figure 29 showed business type to entail currency exchanges (AFP Ball v Harrow Crown Court, 2015; R v Ali, 2008), import/export (R v Gibson, 2014), money transfer/services (R v Hussain, 2012; R v K, 2007), estate and letting (R v Hussain, 2012), and scrap metal and haulage yard (R v Ramdas, 2012). In a few instances, the mentioned

business is effectively a front for the money laundering offence. To illustrate, the defendant owned the scrap metal and haulage yard mentioned in R v Ramdas (2012). The finding is crucial as it indicates that businesses are owned to aid money laundering.

Figure 29

Keyword-In-Context: business
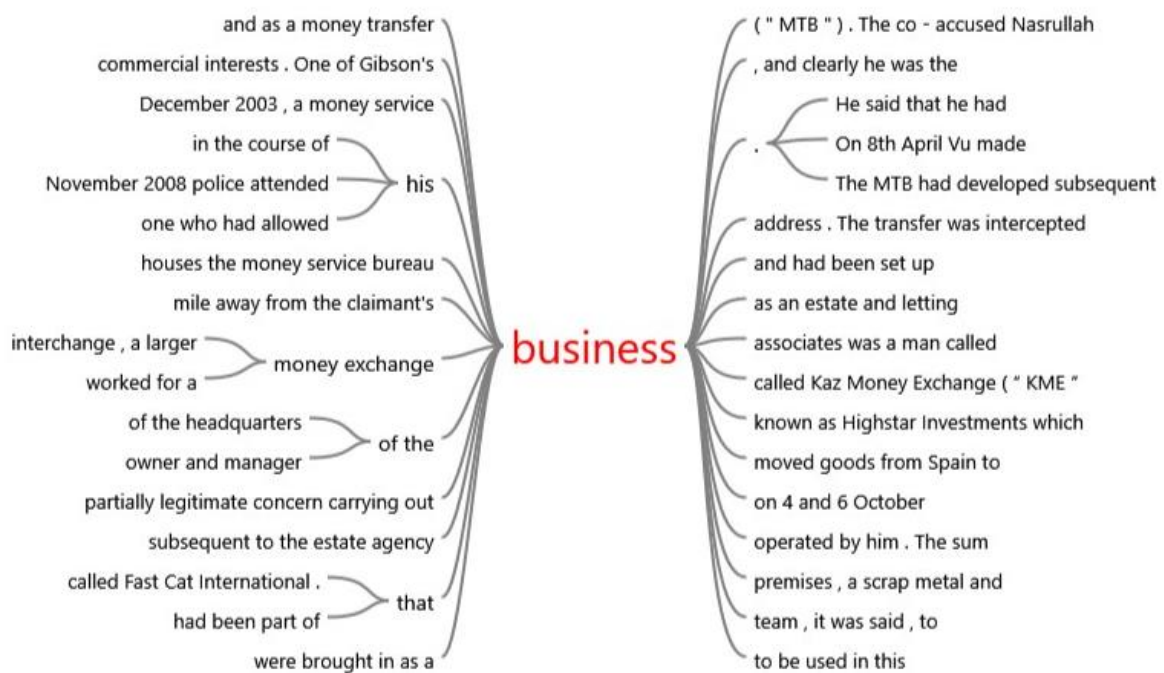
To a lesser extent, bank branches were referenced as the location of money laundering. Though 20 references to the keyword "bank" or "banking" were identified, only in two instances were offenders depicted as visiting bank branches (R v Dao, 2008; R v Imasuen, 2014). The keyword-in-context analysis in Figure 30 illustrates that many quasi-sentences covered the keyword to depict bank notes, accounts, and specific financial institutions like Barclays and Lloyds. Additionally, in one instance, the quasi-sentences outlined how a bank account of a family friend of the offender was used for the money laundering offence (R v Okunkpolor

(Kelvin) (2014)). The text segment suggests that offenders may use friends to shield money laundering offences.

Figure 30

Keyword-In-Context: bank
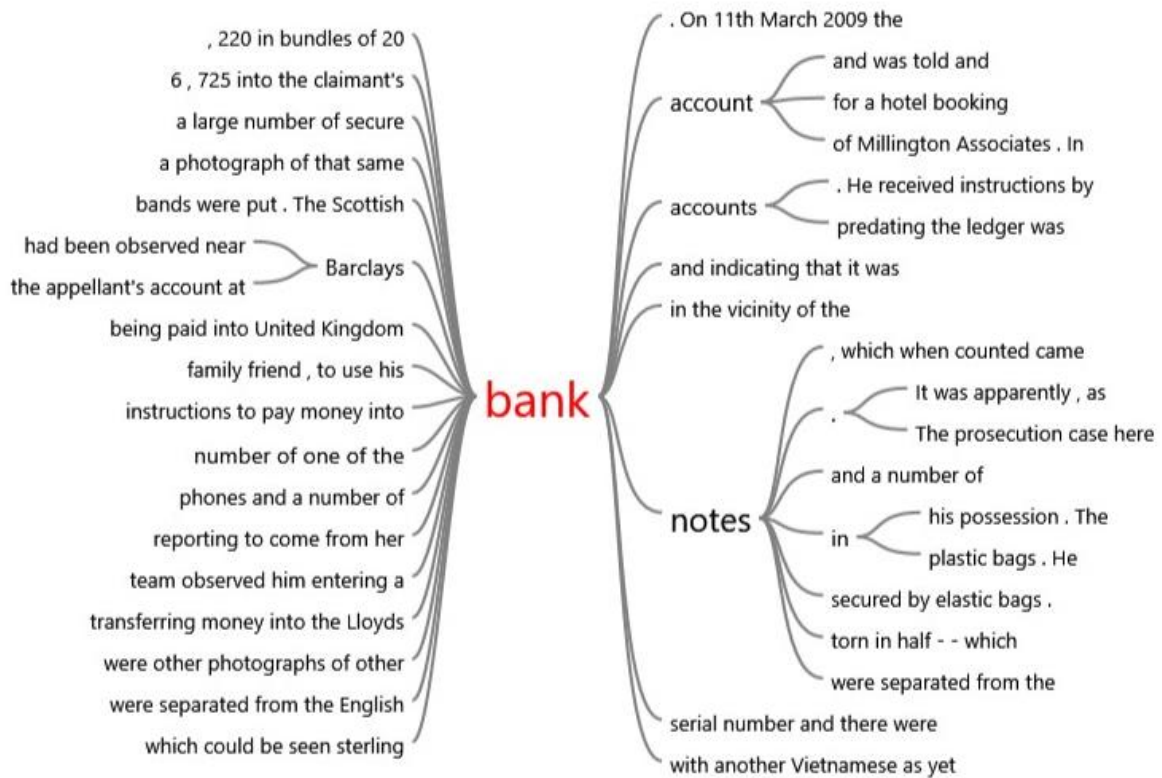
Fifth, a small number of quasi-sentences entailed contextual information about offenders. Usually, judges mentioned offender-related information, such as full name or age, and were not amongst the 50 most frequent keywords. The unique spelling of these aspects can explain the lack of offender-related information amongst the keywords with the highest frequency counts. However, few quasi-sentences informed about recurring characteristics of criminals who launder money. Sixteen references to the keyword "man" indicated that offenders engaged in money laundering were predominantly male. Furthermore, eleven

references to the keyword "organised", "organisation", "organise", or "organisers" were found in the text. The keyword-in-context analysis illustrated in Figure 31 suggests the involvement of organised crime. Indeed, judges sometimes referred to the Serious Organised Crime Agency (former UK law enforcement agency). However, they also used the keywords to depict "organised crime gang" (R v Koli & Mee, 2010), "organised group" (R v Kowalska, 2016) "organisation" (R v Ali, 2008; R v Thakrar & Yusoof, 2008).

Figure 31

Keyword-In-Context: organised

5.3.2 Predicate Crime

Word frequency counts were computed for 191 quasi-sentences detailing the predicate crimes of money laundering incidents. Appendix XX presents the 50 most frequent keywords in statements portraying the underlying crime generating the illegal proceeds. For the most part, keywords indicated that the main predicate crimes were drug offences, fraud, and theft. To a lesser extent, text segments also depicted cigarette and jewellery smuggling, corruption, and tax evasion as predicate offences to money laundering. First, drug offences are the most prominent predicate crime to money laundering. Ninety-five references to the keyword "drug" or "drugs" were identified. Here, the keyword-in-context analysis outlined in Figure 32 showed

that judges used the word primarily to describe drug trading. However, in one instance, the

judge detailed the unlawful dealing in gems (R v Shodijo, 2008).

Figure 32

Keyword-In-Context: dealing

Likewise, 27 times judges referred to the keyword "trafficking" or "trafficker". Looking at the

keyword-in-context list, judges used the term exclusively to depict the trading of narcotics.

Thirteen remarks to the keyword "supplying", "supplied", "supplies", or "supply" were found

in coded text segments, which were all related to offenders delivering various types of

narcotics. Twelve mentions of the keyword "cannabis" were identified and, in its context, were used to portray the cultivation and trade of this particular drug.

Second, fraud is another predicate crime to money laundering often mentioned in quasi-sentences. Twenty-six times judges mentioned the keywords "fraud" or "frauds". Some transcripts further specified the type of fraud. For instance, judges referenced advance fee frauds (R v Imasuen, 2014), confidence trick (R v Gumble, 2013), drive style and hotel frauds (R v Okunkpolor, 2014), financial fraud (R v Nalborough, 2010), and missing trader fraud (R v Evans & Anor, 2010).

Third, theft was considered a predicate offence to money laundering. Even though less prominent than drug offences and fraud, stolen goods were portrayed as the subject of money laundering. Ten counts of the keyword "stolen" were identified in the coded text. Here, the keyword-in-context analysis in Figure 33 entails stolen goods to cover either cash or money taken from bank accounts, a car, cheques, computer parts, and a mini motorcycle.

Figure 33

Keyword-In-Context: stolen

Fourth, alternative predicate crime types were discussed only occasionally. The keywords "represented", "represent", "representing, or "represents were counted 17 times. The keyword-in-context analysis in Figure 34 showed that the words, for the most part, were linked to drug offences and fraud. However, in one instance, the judge mentioned jewellery smuggling (R v Basra (Ajaib Singh)).

Figure 34

Keyword-In-Context: represented
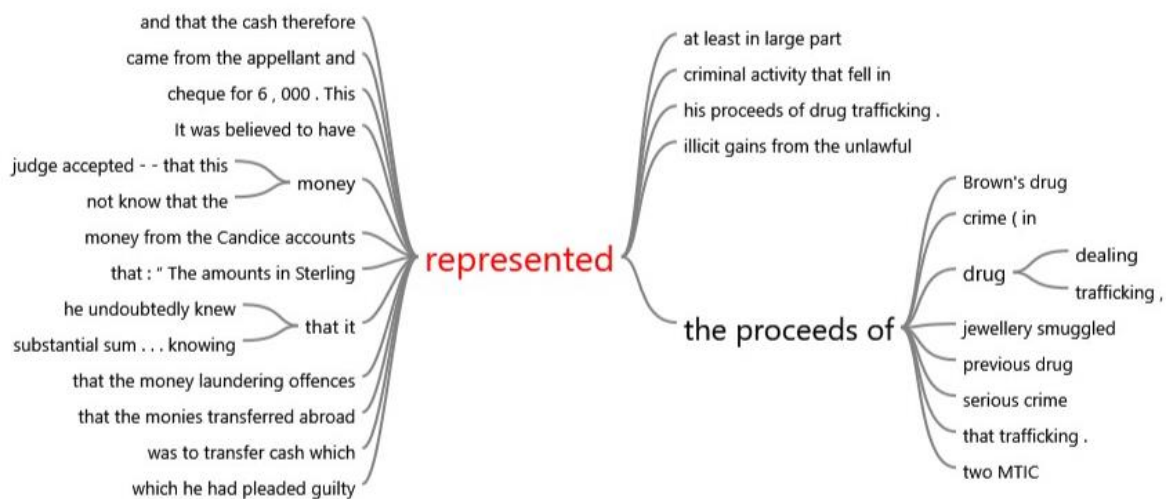
Along similar lines, ten references to the keywords "operations", "operated", "operating", and "operation" were found in the text, which for the most part, were concerned with drug trades. However, in one instance, a judge mentioned cigarette smuggling as a predicate offence (R v Everson, Soneji, Bullen, 2001). Additionally, the keyword "basis" was counted nine times. The related keyword-in-context analysis outlined in Figure 35 showed a single reference to tax evasion as the predicate crime to money laundering.

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Figure 35

Keyword-In-Context: basis
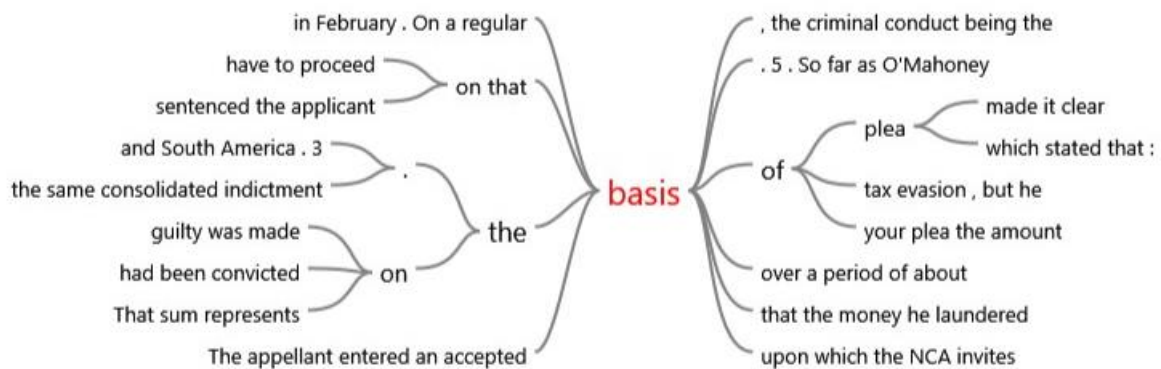
Finally, 15 mentions of the keyword "used", "use", or "using" were counted in coded text segments. Here, the keyword-in-context analysis in Figure 36 entailed references to corruption (R v Ibori, 2011).

Figure 36

Keyword-In-Context: used
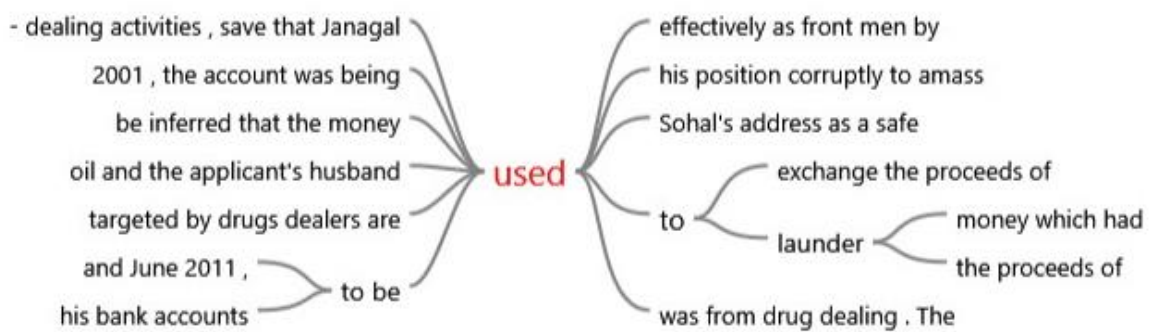
5.4 Discussion

This chapter's primary objective has been identifying the properties that make the proximal circumstances of money laundering. To that end, 567 quasi-sentences outlining contextual information and predicate crimes were explored using word frequency analysis. The discussion begins by outlining the nine key findings, including implications for the conceptual level, before summarising the strengths and limitations of this analysis.

5.4.1 Key Findings

There are nine key findings of the word frequency analysis of information from court transcripts about the proximal circumstances of money laundering. First, money laundering follows different predicate offences. Most quasi-sentences saw judges detailing drug offences, fraud, and theft as predicate crimes to money laundering. Occasionally, court documents contained references to cigarette and jewellery smuggling, corruption, and tax evasion. The findings are mostly in line with the academic literature, where different kinds of predicate crime have been discussed. For example, some studies examined money laundering in the context of drug trafficking (Soudijn, 2016; Steinko, 2012; van Duyne & Levi, 2005), tobacco smuggling (Antonopoulos & Hall, 2016; Di Nicola & Terenghi, 2016), and human trafficking (Petrunov, 2011). Others have studied money laundering behaviours across a wide range of predicate crimes, such as corruption, fraud, tax evasion, and theft (Irwin et al., 2012; Rusanov & Pudovochkin, 2018; S. Schneider, 2004; Suendorf, 2001; van Duyne, 2003). Regardless, an unexpected finding of the present investigation was jewellery smuggling as a predicate offence to money laundering. The academic literature typically views jewellery smuggling as a money laundering method. For instance, the Financial Action Task Force and Egmont Group of

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Financial Intelligence Units (2013, pp. 5–7) described how diamonds could be used across placement, layering, and integration to launder funds of predicate offences such as drug trafficking, fraud, smuggling, theft and robbery, and tax offences. A possible explanation for the finding may be due to the blurred lines between predicate offences and money laundering. For example, van Duyne (2003, p. 77) has referred to this unique feature as "canned laundering", where the criminal asset is generated and processed simultaneously. The separating line between predicate crime and money laundering is not always obvious.

Second, offender-related information was scarce. Full judgment transcripts covered only rudimentary evidence about the offenders' gender. Here, word frequency analysis suggests that offenders are predominantly male. The finding is in line with the few available empirical studies that considered gender in their analysis. For example, Matanky-Becker and Cockbain (2021), who identified 52 suspects related to 31 money laundering investigations, found 82 percent to be male. The fact that the word frequency analysis did not reveal more information about offenders can be explained by the nature of reporting at court. Simply put, offender-related information was often too specific to be found amongst the 50 most frequent keywords. For example, the offenders' surnames were, for the most part, only mentioned once. The field of money laundering has yet to establish the essential attributes of individual offenders.

Third, organised crime is involved in money laundering. The word frequency analysis suggests the presence of organised crime groups during money laundering. To some extent, quasi-sentences contained references to organised crime groups. Finding references to organised crime groups is hardly surprising. Effectively, empirical money laundering research is done through the lens of organised crime groups, utilising concepts and data related to the

phenomenon (Kruisbergen et al., 2015; Riccardi, 2014; Soudijn, 2016; Soudijn & Reuter, 2016; van Duyne, 2003; van Duyne & Levi, 2005). However, it is important to note that money laundering can occur independently from organised crime. Legally, a money laundering offence is committed irrespectively of the involvement of an organised crime group. To illustrate, the United Kingdom Crown Prosecution Services' (2018) approach to prosecuting money laundering entails showing that the assets in question are of criminal origin and that the alleged offender was aware of its illegal origin. The participation of organised crime groups is not required for the conviction. In future research, the role and extent to which money laundering is linked to organised crime should be further differentiated. Additionally, it seems helpful to establish the prevalence and form of money laundering by offenders without any ties to organised crime.

Fourth, family and friends can be co-offenders in money laundering. To illustrate, offenders could use the bank accounts of their partners and friends to funnel illegal funds through the financial system. More generally, the quasi-sentences pointed to the complicity of people with whom offenders have social ties. The role of family and friends in money laundering is rarely discussed empirically in the academic literature. However, few existing studies suggest that money launderers use family and friends extensively. For example, Soudjin (2010) studied the complicity of 65 wives and girlfriends of male suspects in the Netherlands. The findings suggested that 60 wives and girlfriends were either active participants in money laundering or fully aware that the money they spent was of criminal origin. Likewise, Malm and Bichler (2013) investigated money launderers in Canadian drug markets using social network analysis for 2,197 individuals. Here, co-offenders with social ties were more commonly observed than co-offending professionals, such as accountants, lawyers,

real estate agents, and stockbrokers. Overall, family and friends can play an essential role as co-offenders during money laundering.

Fifth, money laundering primarily involves cash. Word frequency analysis suggests that English and Scottish banknotes were recurring components of money laundering across England and Wales. These findings represent the dominant view in research and practice, which stresses the importance of monetary assets (European Commission, 2019; Europol, 2015; Riccardi & Levi, 2018; Soudijn, 2016). However, from a legal perspective, money laundering is not limited to monetary assets. For instance, the United Kingdom's anti-money laundering legislation considers processing all criminal property a money laundering offence (Proceeds of Crime Act, 2002, Section 326). Today, non-monetary criminal assets have simply received little attention in research and practice (van Duyne et al., 2018, p. 120).

Sixth, police interventions were a recurring feature of money laundering offences. Judges regularly referred to law enforcement activities that led to the detection and disruption of money laundering offences. Typically, offenders were already under surveillance or stopped at customs or road checks. The analysis, however, returned no keywords that would hint at the reasons behind the police surveillance or on-the-spot checks. Possible explanations are plentiful. The respective interventions may have been the result of anti-money laundering measures. Another explanation might be that the money laundering offence was uncovered during investigations into the predicate crime. Lastly, money laundering offences could have accidentally been detected by law enforcement. The findings are complementary to the ongoing scientific debate about the detection of money laundering. Here, the scientific debate has predominantly focused on detecting suspicious financial transactions related to fraud inside the financial system. Tiwari et al. (2020) conducted a literature review of money laundering

research and saw numerous studies on automated money laundering detection systems. For example, Gao and Ye (2007) proposed a data mining framework based on suspicion data preparations and rare transactional pattern recognition, including fraud/outlier detection. Likewise, Chang et al. (2008) introduced a visual analysis tool to detect fraudulent wire transactions. However, the skewed view on fraud money laundering detection using banks is of little help for activities outside the financial system. In this way, the present word frequency analysis offers a complementary viewpoint on money laundering interventions.

Seventh, there are differences in when money laundering occurs. The word frequency analysis showed that certain months and years were mentioned more frequently than others. Quasi-sentence repeatedly covered the months of February, July, September, October, and November, as well as the years 2003, 2005, and 2011. However, the findings should not be overstated, as judges often reported dates in the form of parenthesis in the middle of statements. As a result, this analysis often found dates in quasi-sentences across all codes. The haphazard reporting of dates may explain why years appeared in the list of the 50 most frequently used keywords across all codes. Ultimately, it was impossible to clarify if these dates are significant for understanding how money laundering works or if these observations are simply the result of this data analysis procedure of the study at hand.

Eight, the spatial dimension of money laundering covers various locations. Word frequency analysis suggests money laundering locations at the city and street levels. At the city level, judges repeatedly referred to London when reading the verdict. Along similar lines, the literature has considered London as the money laundering hub of the United Kingdom. For example, Savona and Riccardi (2017) assessed the money laundering risk for different municipalities of selected European countries. The City of London is the area with the highest

money laundering risk in the United Kingdom. Likewise, Tax Justice Network (2020b) considers the City of London as the global offshore centre of the United Kingdom, which has created a crime-facilitating environment. At the street level, court transcripts comprised references to businesses, residential buildings, and roads as money laundering locations. The findings are significant because current money laundering research has not considered crime locations at the lower municipality level. Consequently, this chapter offers a complementary view to money laundering research focusing on larger spatial units.

Ninth, criminals sometimes use their own companies for money laundering. Genuine companies fulfil an integral function during money laundering. Throughout this thesis, offenders were observed exploiting a wide range of products and services from legitimate businesses. However, companies can be utilised in another way. In very few cases, offenders owned the businesses utilised for money laundering. Here, the word frequencies and keyword-in-context analysis suggest offenders effectively using their firms as a front for the money laundering offence. Accordingly, the chapter complements the current scientific debate about exploiting corporations for money laundering. In the academic literature, the use of legitimate companies owned by offenders for money laundering has been discussed from various perspectives, including the professions (Benson, 2020; Lankhorst & Nelen, 2005; Soudijn, 2012, 2014) and corporate structures and vehicles (He, 2010; Lord et al., 2018, 2019; Riccardi & Savona, 2013). Through providing products and services or acting as a front, legitimate corporations are a critical component of money laundering.

5.4.2 Categorisation

The key findings can be viewed through the lens of the proximal circumstances. As illustrated in Figure 37, the results were categorised into those components that make the proximal circumstances of money laundering, including the predicate crime, potential offender, and situation. The following pages offer the rationale behind categorising the findings of the word frequency analysis as key components of the proximal circumstances of money laundering.

The *predicate crimes* identified through the word frequency analysis included a small class of offences comprising drug offences, fraud, theft, and jewellery smuggling. As previously discussed, the predicate offence was thought to affect the offender-situation interactions of money laundering. Criminal actors participating in the predicate crime were often the same offenders engaged in the subsequent money laundering offence. Additionally, the predicate offence was seen to impose logistical constraints by determining the amount and type of criminal assets (Levi & Soudijn, 2020; Malm & Bichler, 2013; Soudijn, 2014). The concept of proximal circumstances allows connecting the predicate crime with the money laundering offence at a conceptual level, which is a significant contribution since the relationship between predicate crime and money laundering is typically considered self-evident (Levi & Reuter, 2006; Reuter & Truman, 2004).

Figure 37

Classification: Proximal Circumstances

Offenders' Gender

Proximal Circumstances

Potential Offender

Program-med potential

Current state

Drug offences
Fraud
Jewellery smuggling
Theft

Predicate Crime

Offender presence in situation

Streets, Commercial & residential buildings (location)
Organised crime (logistical environment)
Co-offenders with social ties (logistical environment)
Business ownership (logistical environment)

Envi-ronment

Modul-ators

Target

Law enforcement

English and Scottish bank notes

Situation

Moreover, the *potential offender* and subcomponents were detailed. The word frequency analysis returned only a few keywords that could be linked to the *programmed potential* and *current state* of the offenders. Rudimentary information about the offenders' gender can be understood as a proxy for the biological factor as part of the programmed potential to commit money laundering. The reason is that males typically engage more in crimes than females. For example, Choy et al. (2017) found that males' lower resting heart rate partially mediates the relationship between gender and committing violent and nonviolent crimes. Apart from the gender of the offender, no evidence for predispositions or difficult living conditions contributing to offending was uncovered by the word frequency analysis. Potential offenders and relevant subcomponents require further specifications.

Finally, most key findings relate to parts of the *situation*. In the paradigm, the situation consists of three subcomponents, namely the environment, target, and modulators. First, the *environment* of money laundering comprises the crime locations and logistical environment. London, as well as businesses, residential buildings, and streets, were mentioned as the *locations* of money laundering. However, the paradigm of proximal circumstance operates on the micro-level of the offender-situation interaction (Ekblom, 1994, p. 208). Consequently, only businesses, residential buildings, and roads were regarded analytically relevant since they directly relate to money laundering offences. References to the location at the city level or above were not regarded in the scope of the paradigm. Additionally, key findings included information about the *logistical environment*, including organised crime and offenders with social ties. First, organised crime was considered a logistical factor of the environment. From a conceptual perspective, the distinct role of organised crime in the offender-situation setting is ambiguous because one can think of organised crime as an offender type and part of the situation. In this thesis, organised crime was seen as part of the situation,

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specifically the logistical environment. The logistical environment in the proximal circumstances comprises physical and social factors that make offending easier or more attractive (Ekblom, 1994, p. 204). Organised crime can be considered an environmental factor whose presence makes money laundering more likely. Felson and Clark (2012, p. 221) have advocated the view of organised crime as a way to meet the logistical challenges of crime. Here, organised crime is believed to offer personal ties, shared activity space, telecommunications, and legitimate roles that make committing crimes more efficient. This thesis adopts this view and considers organised crime part of the logistical environment.

Second, English and Scottish banknotes were the *targets* of money laundering. In the paradigm of proximal circumstances, targets are passive components of the situation. Ekblom (1994, pp. 202–203) outlined the features of targets as to be present in the situation, attractiveness to the offender, and vulnerability to offenders. Analogously, all monetary and nonmonetary criminal assets can be considered the targets of money laundering. Naturally, monetary and nonmonetary criminal proceeds need to be present in the situation for money laundering to occur. Furthermore, illegal profits are attractive to the offenders for several reasons. The scientific literature has highlighted that potential money launderers wish to invest criminal assets in order to increase profits, gain power, or leverage existing social ties (Kruisbergen et al., 2015; Levi & Soudijn, 2020; Riccardi, 2014; Savona & Riccardi, 2018). Finally, as a product of the predicate offence, criminal assets are already in possession of offenders and are naturally highly vulnerable to further processing. In this thesis, the most frequently mentioned criminal assets were English and Scottish banknotes and, consequently, were considered targets of money laundering.

Third, police and co-offenders with social ties were *modulators* of money laundering. Within the paradigm of proximal circumstances, modulators can manipulate the offender-situation interaction before, during, and after the crime has occurred and, ultimately, affect the likelihood of the crime happening. Ekblom (1994, p. 203) has emphasised that modulators can modify the proximal circumstances in either direction, making crimes both more and less likely. In this thesis, both kinds of modulators were identified. For one thing, police surveillance and border controls as well as road checks often led to the uncovering of money laundering offences. For another thing, people with social ties to offenders provided access to services that aid money laundering. In one instance, a family friend's bank account was used to launder money. Knowingly or not, in doing so, the friend enabled the crime commission and was hence, considered a modulator in the proximal circumstances of money laundering. From a conceptual perspective, police and co-offenders with social ties were seen as *modulators* of money laundering.

5.4.3 Strengths and Limitations

The analysis of the proximal circumstances of money laundering has strengths and limitations. Strengths are both conceptual and empirical contributions. Conceptually, this enquiry makes an original contribution by applying the paradigm of proximal circumstances to money laundering. The conceptual framework describes the central environmental components surrounding money laundering and the assumed mechanism at play. From an analytical perspective, the novelty of the conceptual framework is threefold. First, in the new conceptual framework, the predicate offence is a crucial part of the proximal circumstances. This new perspective offers a breakdown of the assumed link between predicate crime and money

laundering, typically accepted axiomatically in research and practice. Second, the proximal circumstances of money laundering combine features of the offender-situation interaction in a single conceptual framework. Crime features routinely discussed in isolation, such as predicate offences, offenders, and situations, were analysed under a single conceptual framework. Third, the conceptual framework is a micro-level approach and can be considered complementary to those studies that examine environmental factors of money laundering on the meso- or macro level. Empirically, the thesis has shed light on some key components of the proximal circumstance of money laundering. Here, court transcripts mainly contained information about the predicate crime and situation. The predicate crimes found in the court transcripts covered a narrow range, with jewellery smuggling as an underexplored crime type. Additionally, situational factors outlined in court transcripts covered many elements, including organised crime, co-offenders with social ties, crime locations, criminal assets, and police interventions.

The limitations of this chapter are conceptual, methodological, and empirical. Conceptually, the paradigm of proximal circumstances comprises mechanisms close in time and space to the money-laundering crime event (Ekblom, 1994, p. 194). Following this perspective, this chapter has focused on the proximal properties of the environment directly linked to money laundering. By implication, distal environmental factors indirectly affecting money laundering were not explicitly mentioned. However, distal properties of the money laundering environment are presumed to be linked to the proximal circumstances. Ekblom (1994, p. 208) considers distal causes of crime to operate through the proximal circumstances. Even though not explicitly mentioned, distal environmental properties were captured in this analysis. Methodologically, the word frequency analysis assumes that frequencies allow identifying meaningful text units. Those keywords suggesting essential features of the proximal circumstances with only low mentions in the text may be overlooked by relying on high-

frequency keywords. In this chapter, the problem was partially mitigated by conducting keyword-in-context analyses, which uncovered unique contextual information. Empirically, the mechanisms underlying the proximal circumstance of money laundering were not tested. Instead, the analysis focused on identifying the key components and subcomponents that make proximal circumstances. In order to mitigate this, the present thesis has consulted relevant money laundering research in support of the suspected mechanisms.

5.5 Conclusion

In this chapter, the immediate environment of money laundering was explored. The paradigm of proximal circumstances was adopted and modified to identify the properties of the criminogenic environment of money laundering. A word frequency analysis of 567 quasi-sentences containing contextual information about money laundering from court transcripts was conducted. Faced with many environmental factors in which money laundering can occur, the paradigm of proximal circumstance has shown to be a helpful tool in reducing complexity and clarifying the suspected mechanisms at work. The conjunction of properties from the proximal circumstance and crime events will be explored in the subsequent chapters.

Part III:

Incidents

Chapter 6:

Money Laundering Incidents

The academic literature has only begun to grasp how the properties of money-laundering crime events and the immediate environment work together. The three-stage model does not account for environmental factors, creating a conceptual and empirical void that still exists today. Conceptually, the scientific literature had to fall back on intuitively plausible explanations to connect money laundering and its environment. The best example of this improvised treatment is the predicate crime (Irwin et al., 2012; Reuter & Truman, 2004; Rusanov & Pudovochkin, 2018; S. Schneider, 2004; Unger & den Hertog, 2012). Reuter and Truman (2004), who investigated which methods are used for which predicate crime, called this assumption a "reasonable conjecture" (p. 32). Empirically, the academic literature has rarely studied crime events and proximal circumstances together. One of the few exceptions is Irwin et al. (2012), who tried to understand why offenders might choose the money laundering methods across predicate offences and the value of funds. The dominating disconnect between money-laundering crime events and proximal circumstances in academic research represents a significant challenge.

In this chapter, money laundering incidents are investigated as a whole. The previous chapters focused on isolating and conceptualising the properties of distinct parts of money laundering. The in-depth analyses of the crime events and proximal circumstances allowed their properties to be specified. However, the main goal of this thesis is to understand how money laundering works, not just its parts in isolation. Understanding their interplay required shifting the focus from individual characteristics to the phenomenon as a whole. The main

objective of this chapter is to explore how individual properties come together during money laundering incidents and assess their prevalence.

The task requires expanding the scientific underpinning of this thesis. Both the conceptual framework and existing data need to be further developed. First, the conceptual framework requires further development to capture the suspected interplay between the proximal circumstances and money-laundering crime events. Second, data needs transformation, including the pairing and re-coding of quasi-sentences. The utilised court records can contain information about multiple money laundering offences at once. With multiple money laundering offences mentioned in the same court document, it must be ensured that information outlined in quasi-sentences relates to the same incidents. In this thesis, this is achieved through the manual pairing of quasi-sentences into cases. Additionally, based on the findings from the previous code and word frequency analyses, a new code set is created that allows for more refined measurements of the properties from the crime event and proximal circumstances. Expanding the thesis' scientific underpinning enabled money laundering and its environment to be examined together.

Money laundering incidents were investigated using descriptive statistics. Where appropriate, descriptive statistics were used to summarise the individual variables of the transformed dataset, including frequency distributions and central tendency. Here, the purpose of describing data was twofold. On the one hand, the descriptive statistics offered a valuable summary of the properties of the money-laundering crime events and proximal circumstances. On the other hand, descriptive statistics enabled spotting potential patterns and outliers in data. Exploring money laundering incidents using descriptive statistics provided valuable insights into how crime events and proximal circumstances come together.

The chapter is an original contribution for two reasons. First, the conceptual framework required further development, clarifying the suspected mechanisms between the proximal circumstances and crime events. Where offenders meet favourable situations, crime events unfold as dynamic processes, allowing for countless arrangements of money-laundering stages and related methods. Second, the chapter provides new insights into known properties of money laundering incidents, such as professionals and organised crime, associated legitimate companies, and predicate crimes, as well as underexplored features of the crime, like the locations, non-financial instruments, and stages concerning ownership changes and logistics.

This chapter is organised as follows: Section one includes the literature review using environment criminology and crime science to explain the rationale behind connecting the proximal circumstances and money laundering stages and their instruments. Section two presents the research methods, including the data transformation and data analysis procedures applied for this exploration. Section three presents the descriptive statistics determining the characteristics of the proximal circumstances and money laundering for 305 cases. Section four entails a discussion of the results in the broader context and highlights the chapter's strengths and limitations.

6.1 Literature review

The interplay between money laundering and its immediate environment requires further attention. So far, money-laundering crime events and proximal circumstances have been discussed in isolation. The purpose has been, in an iterative process between theory and data, to develop an understanding about the individual features. However, the main objective of this chapter is to study how the properties come together during money laundering incidents and

assess their prevalence. This section draws on scientific literature from crime science and money laundering research to conceptualise the suspected interaction between the elements.

Offenders and situations that make the immediate environment need to interlock for crimes to occur. Ekblom (1994) describes the conjuncture of key components as follows:

> with the proximal circumstances paradigm it is possible to define opportunity in terms of the conjunction of offender and situation. It is, in effect, the motivation and mental and physical resources of the offender that combine with qualities of the target and the rest of the situation to make that target vulnerable to a particular person at a particular time and place. (Ekblom, 1994, p. 206)

Taking this viewpoint, the opportunity to commit crimes follows the conjunction of critical components of the offender and the situation. Once the key components are interlocked, the crime event can unfold.

|However, crime events are dynamic processes. Ekblom (1994) has pointed out that crimes should not be viewed as a single episode but as a succession of interrelated events:

> There are two ways in which this aspect can be captured. First, the possibility that the offender, the target and the environment repeatedly combine to produce a succession of similar events, as with domestic disputes or racial harassment, should be allowed for. Second, even what for legal or administrative purposes may be regarded as a single event may have quite a complex structure. Cornish (1993) uses the concept of "scripts" to describe the linked sequence of scenes through which a would-be offender has to navigate in order to successfully conclude the crime. Scripts are a kind of logistical map of the offense. (Ekblom, 1994, p. 197)

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From this perspective, the offender-situation interaction results in norm violations that can unfold in a rather complex chain of interrelated events.

Similarly, money laundering research considers crime events as a series of stages and scripts. For the most part, the scientific literature on money laundering has conceptualised the crime event in one of two ways. First, studies have utilised the three-stage model to break down the crime events into the sequence of placement, layering, and integration. For example, Kleemans et al. (2013) discussed the implication of situational crime prevention for cross-border crimes, including money mules. Similarly, Soudjin (2012) examined how the crime prevention technique of removing excuses can stop professionals working in finance from assisting money launderers at a given stage. Second, the academic literature covers attempts to dissect money-laundering crime events using the crime script approach. For instance, Nicholas Gilmour (2014) used crime scripts to define the steps taken during money laundering through purchasing high-value portable commodities and cash-intensive businesses. All studies had in common that they understand crime events are a predefined and static chain of interrelated events.

In this thesis, the view of static money-laundering crime events is rejected. The predefined sequence of stages and scripts has been criticised in scientific literature as unwarranted. Levi and Soudjin (2020) saw the three-stage model's sequential nature as inaccurate and a generic crime script as empirically or theoretically indefensible. Analogously, the thesis takes a more flexible approach and abandons the idea of money-laundering crime events as predefined processes. Instead, money-laundering crime events are considered the handling of criminal property comprising variable arrangements of stages and methods.

Consequently, crime events were regarded as complex processes where countless manifestations of money laundering are possible.

Viewing money laundering as a dynamic process holds implications for the connection between proximal circumstances and crime events. The offender and situation need to interlock for the crime to occur. However, a situation beneficial to some offenders may not be for others. For instance, van Duyne (2003) highlighted that the series of steps taken during money-laundering crime events depends on offenders' needs:

> The actual sequence depends on the nature of the crime-enterprise or the administrative requirements. For example a trader in second hand and stolen goods, who eschews financial institutions, has little to do with financial constructions. He may only have to justify his illegal income, which may (partly) be achieved by means of inflating the turnover of a front firm (van Duyne, 2003, p. 85)

By way of implications, the requirements of the offenders ultimately determine if a situation is considered an opportunity to commit money laundering in a particular manner.

Together, the proximal circumstances and crime events can be understood to form money laundering incidents. As illustrated in Figure 38, the money laundering incident combines the proximal circumstances and crime events into a single conceptual framework. The proximal circumstances include the predicate crime, potential offender, and situation. Additionally, the crime event comprises money laundering stages and their methods. Unlike previous studies, money-laundering crime events are regarded as a dynamic process, allowing for various arrangements of stages and related instruments. Instead of providing a fixed sequence of stages and instruments, the elements outlined in the money-laundering crime event represent building blocks that can be arranged at will. Crime events unfold where motivated

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offenders and situations that present an opportunity for money laundering meet. The proximal circumstances and crime event stand for the conceptual framework of the money laundering incident.

Figure 38

Money Laundering Incident
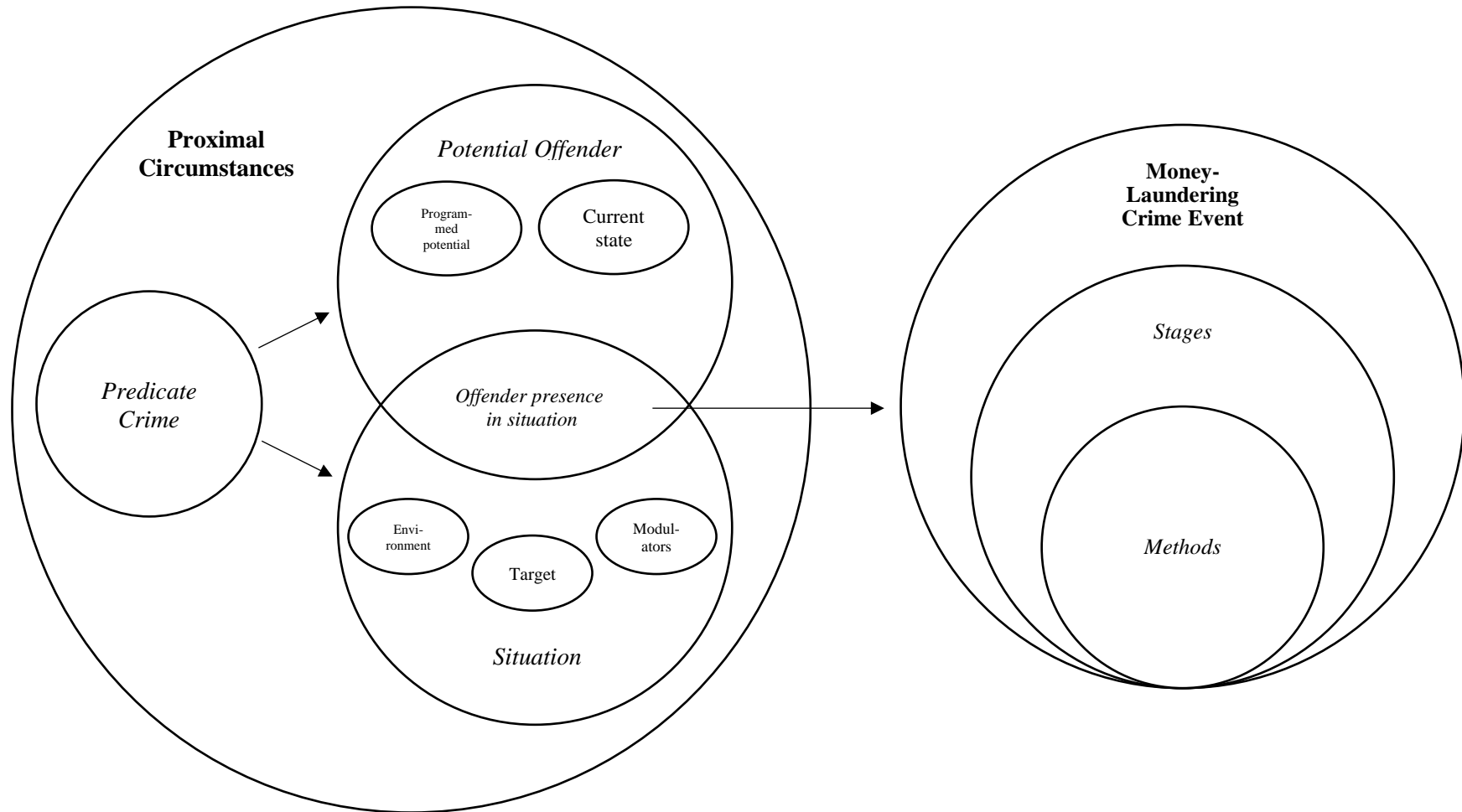
6.2 Method

The main goal of this chapter is to assess the prevalence of characteristics from proximal circumstances and crime events during money laundering incidents. To that end, sample 2 was created. All 1,364 quasi-sentences from court transcripts describing particular money laundering incidents were grouped and re-coded. Next, descriptive statistics were calculated to summarise the individual variables in sample 2, including distribution, central tendency, and dispersion. The distinct steps for drawing sample 2 and data analysis are outlined below.

6.2.1 Sample 2

Sample 2 consists of 305 money laundering incidents and their characteristics. A money laundering incident was a single episode of handling monetary and non-monetary criminal assets comprising features from the crime event and the immediate environment. Building on the previous chapters, the 1,364 quasi-sentences found in 180 full judgment transcripts from the Court of Appeal and Administrative Court of England and Wales (from 2000 to 2016) were grouped together to form a money laundering incident. The criminal asset acted as the natural focal point of any money laundering incident and helped to spot and organise quasi-sentences accordingly. The actual grouping of quasi-sentences was conducted in NVivo 12 and resulted in 305 cases.

Next, codes and subcodes were recorded for 305 money laundering incidents. Once all quasi-sentences related to individual money laundering incidents had been grouped, the measurements were applied. Coding the characteristics of money laundering incidents marks the transition from the software application NVivo 12 to Microsoft Excel. The main reason for moving from NVivo 12 to Microsoft Excel was to enable the use of quantitative analysis

methods. It was decided to manually record the codes and subcodes in Microsoft Excel based on the NVivo 12 records of paired quasi-sentences.

Not all codes were split into subcodes. The refinement of codes was only warranted where the empirical and conceptual relevance of subcategories could be demonstrated. For some components of the proximal circumstances, splitting codes into subcodes was not justified. In particular, refining codes for the offenders, law enforcement activities, and intermediate stages was unwarranted. First, subcodes for *offenders* were neither empirically nor conceptually defensible. The court transcripts did not contain much offender-related information. The word frequency analysis in the previous chapter only returned information about the offender's sex and hardly showed variability. However, the paradigm of proximal circumstances did not consider offenders' sex a critical feature but instead comprised the programmed potential and current state (Ekblom, 1994, pp. 199–202). In addition, the available academic literature on money laundering did not contain research to suggest that the offender's sex affects how money is laundered. Second, no subcodes for *law enforcement as* the situation's modulator were created. The sole reason for not further exploring law enforcement activities was the lack of additional detail in the analysed court transcripts. Third, the *intermediate stage* was analytically ambiguous. Quasi-sentences of this kind comprised information related to proximal circumstances and money-laundering crime events. To illustrate, setting up financial accounts may be considered part of the environment. In contrast, opening the compartment of a car to remove criminal cash was part of the crime event. Further analyses are required to conceptualise these observations. Since this goes beyond the scope of this thesis, it was decided not to consider the intermediate stage for further analysis.

Data transformation was required for some textual information. Money laundering incidents in sample 2 could involve criminal monetary and non-monetary assets. Occasionally, where money laundering concerns criminal monetary assets, foreign currencies could be

involved. The currency needed to be standardised to allow for cross-case companions. To this end, the currencies were standardised using the average Sterling exchange rates of the respective year in which the trial took place. Historical exchange rates were accessed via the Office for National Statistics (2022) in the United Kingdom and the Bank of England (2022). Currencies were standardised in 23 money laundering incidents and reported as a total sum of Sterling. The non-Sterling notes included Euros, US Dollar, and former Dutch guilders. The final dataset covered 84 categorical and continuous variables for 305 money laundering incidents.

6.2.2 Data Analysis

The money laundering incidents in sample 2 were analysed using descriptive statistics. Previously, textual information about money laundering properties was analysed across- and within full judgment transcripts. However, the shift in perspective from full judgment transcripts to money laundering incidents also affected the comparative design of this chapter. Table 6 outlines the components of the cross-case analysis of money laundering incidents. Compared to the previous chapters, the data analyses changed significantly. The analytical strategy no longer included a mix of cross-case and within-case designs but solely focused on cross-case comparisons. The changing data analysis procedure stood for the shift in perspective from the individual properties to the entire money laundering phenomenon.

Table 6

Cross-Case Strategy: Money Laundering Incidents

Analytical Strategy	Purpose	Case Unit	Outcome
Cross-Case Analysis	Summarising Characteristics of Money Laundering Incidents	Money Laundering Incidents	Frequency Distribution: Variables

The cross-case comparison focused on producing descriptive statistics for individual variables. The rationale for producing descriptive statistics for the present data analysis was threefold. First, descriptive statistics offer a basic summary of the data in sample 2, allowing the reader to get familiar with the shift in perspective prior to the more complex analyses in the next chapter. Second, descriptive statistics allow patterns and outliers to be detected in data, potentially affecting subsequent investigations (Brown Breslin, 2020). Third, descriptive statistics are best suited for the data in sample 2. Full judgment transcripts could contain information related to multiple counts of money laundering. As such, available data was unsuitable for multivariate analyses since the statistical independence of cases could not be assumed. For the above reasons, the cross-case comparisons in this chapter relied on descriptive statistics.

Descriptive statistics for 305 money laundering incidents in sample 2 were produced in Microsoft Excel. Frequency distributions and graphs were combined to summarise money laundering incidents. In addition, where it was thought helpful, the mode was reported for categorical variables and the mean and standard deviation for continuous variables. The following section reports the descriptive statistics for 305 money laundering incidents in sample 2, enabling the prevalence of characteristics from proximal circumstances and crime events during money laundering incidents to be assessed.

6.3 Results

Descriptive statistics for 305 money laundering incidents from sample 2 were calculated to assess the prevalence of characteristics from proximal circumstances and crime events. The basic summaries of the proximal circumstances and money-laundering crime events are reported below.

6.3.1 Proximal Circumstances

From the conceptual perspective, the key components of the proximal circumstances of money laundering comprise the predicate offence, offender type, and situation. However, not all parts were equally represented in the data. Court transcripts primarily covered information about the predicate offence and situation of money laundering. Less frequently, offender-related information could be observed. Consequently, the following pages only outline the descriptive statistics for the predicate offence and situation.

6.3.1.1 The Predicate Offence. This subsection presents the types of predicate offences underlying the 305 money laundering incidents. Theoretically, money laundering incidents could involve criminal assets from multiple predicate offences simultaneously. As such, predicate offences were not mutually exclusive categories. However, the laundering of criminal assets from multiple predicate crimes was not observed. All money laundering incidents concerned the proceeds of a single predicate crime category. Here, ten predicate crimes could be observed across money laundering incidents. Figure 39 outlines the type of predicate crime across money laundering incidents. The most frequently observed predicate crime type were drug-related offences. Approximately half of the investigated money laundering incidents entailed the proceeds of drug trafficking (*N=160*, 52.5%). Additionally, money laundering incidents could often entail the proceeds of fraudulent activities. Over 15 percent of analysed

money laundering incidents were connected to fraud (*N=51*, 16.17). By comparison, other predicate offences were less frequently observed across money laundering events. Theft and burglaries (*N=14*, 4.6%) were the predicate crime for around five percent of the money laundering incidents. Moreover, less than three percent of money laundering incidents each were related to proceeds from tax evasion (*N=7*, 2.3%), jewellery smuggling (*N=4*, 1.3%), cigarette smuggling (*N=4*, 1.3%), and illegal prostitution (*N=2*, 0.7%). Lastly, cybercrime (*N=1*, 0.3%) and corruption (*N=1*, 0.3%) were the predicate offence to a single money laundering incident each. However, the exact class of predicate offences was not always specified. In such cases, prosecutors could prove that the proceeds in question were not of legal origin but failed to specify the exact crime. For one-fifth of the money laundering events, the distinct predicate crime remained unknown (*N=61*, 20%).

Figure 39

Predicate Offence Types
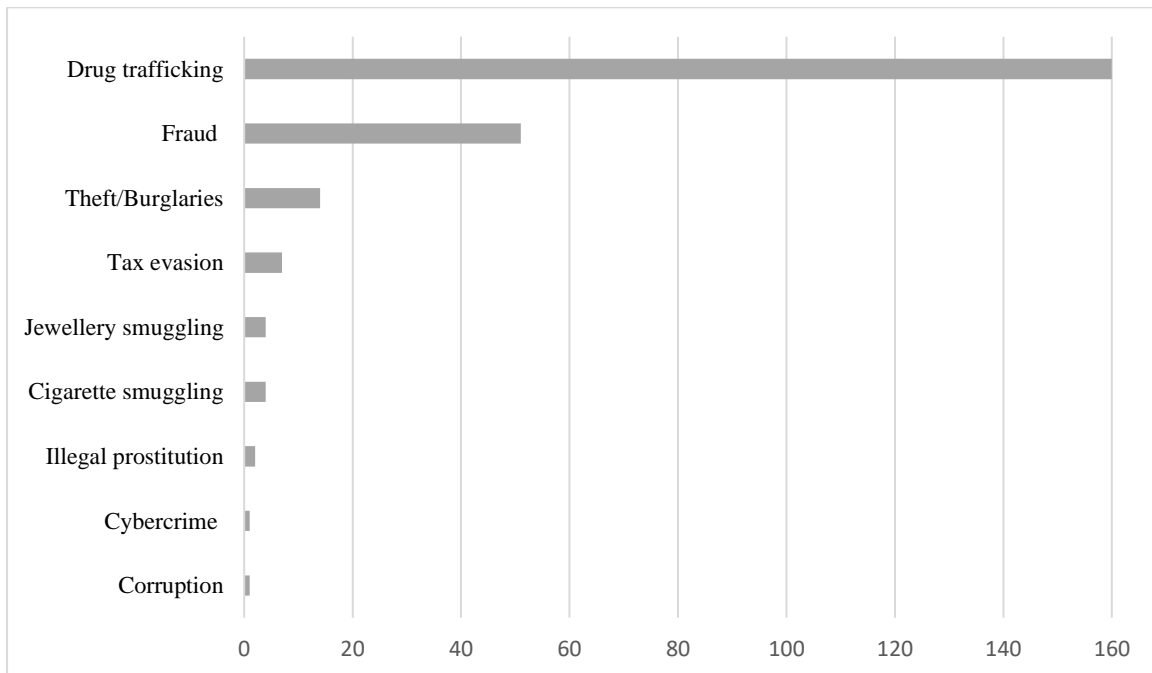
6.3.1.2 The Situation. In this subsection, the descriptive statistics for the situation of money laundering are reported. The information included the frequency distribution for components of the targets and the environment of money laundering incidents.

6.3.1.2.1 Targets. From a conceptual perspective, criminal assets represented the targets of money laundering. On the whole, nine kinds of criminal assets or targets were observed across money laundering incidents. Figure 40 illustrates the frequency distribution of target types. The most commonly observed target of money laundering incidents has been monetary assets. Almost all (*N=295*, 96.72%) money laundering incidents were related to money in the form of cash, cheques, or money already inside the financial system. On average, the criminal monetary assets amounted to £181,494.03 (*SD*=£625,321.86). In other words, the amount of laundered money varied greatly across individual incidents. In very few instances, the targets of money laundering incidents were non-monetary criminal assets. The targets of three (*N=3*, 1%) money laundering incidents were stolen vehicles, including cars and a mini motorcycle. Moreover, one (N=1, 0.3%) observation each was made for money laundering incidents that targeted non-monetary criminal assets, including carbon credits, CISCO router boards, computer equipment, gold jewellery, mobile prepaid cards, a model rail collection, and perfume.

Figure 40

Target Types
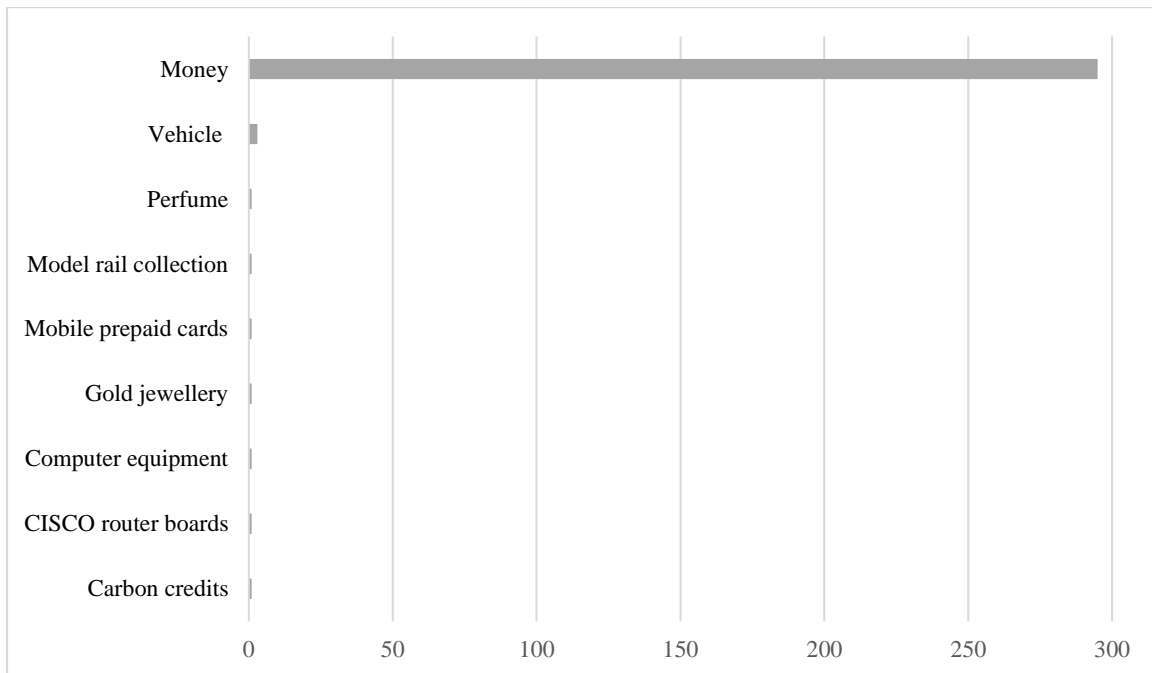
6.3.1.2.2 Environment. In the paradigm of proximal circumstances, the environment consists of the location and logistical factors, which make offending easier or more attractive. The descriptive statistics for money laundering incidents' location and logistical Environment are reported below.

- *Location*. Money laundering incidents took place across a wide range of locations at the street level. Figure 41 shows the frequency distribution for the locations of money laundering incidents. Locations were not mutually exclusive categories. As such, a single money laundering incident comprises numerous locations. Twenty-three different money laundering locations at the street level could be identified. The most frequently observed location where money laundering occurred were residential buildings. Residential buildings such as houses or flats were the primary crime site in one-fifth (*N=63*, 20.66%) of the examined money laundering incidents. In addition,

money laundering took place on the roads. Streets were the primary money laundering location in more than one-eighth (*N=51*, 16.72%) of the explored incidents. Contrary to this, other money laundering locations were observed in less than one-tenth of money laundering incidents. Money service and currency exchange businesses (*N=27*, 8.85%), airports (*N=10*, 3.28%), hotels (*N=7*, 2.95%), car parks (*N=5*, 1.64%), bank branches (*N=5*, 1.64%), car ferries (*N=2*, 0.66%), and unspecific commercial buildings (*N=2*, 0.66%) were less commonly mentioned. Lastly, the reminder money laundering locations were only observed a single time and were considered outliers.

Figure 41

Money Laundering Locations
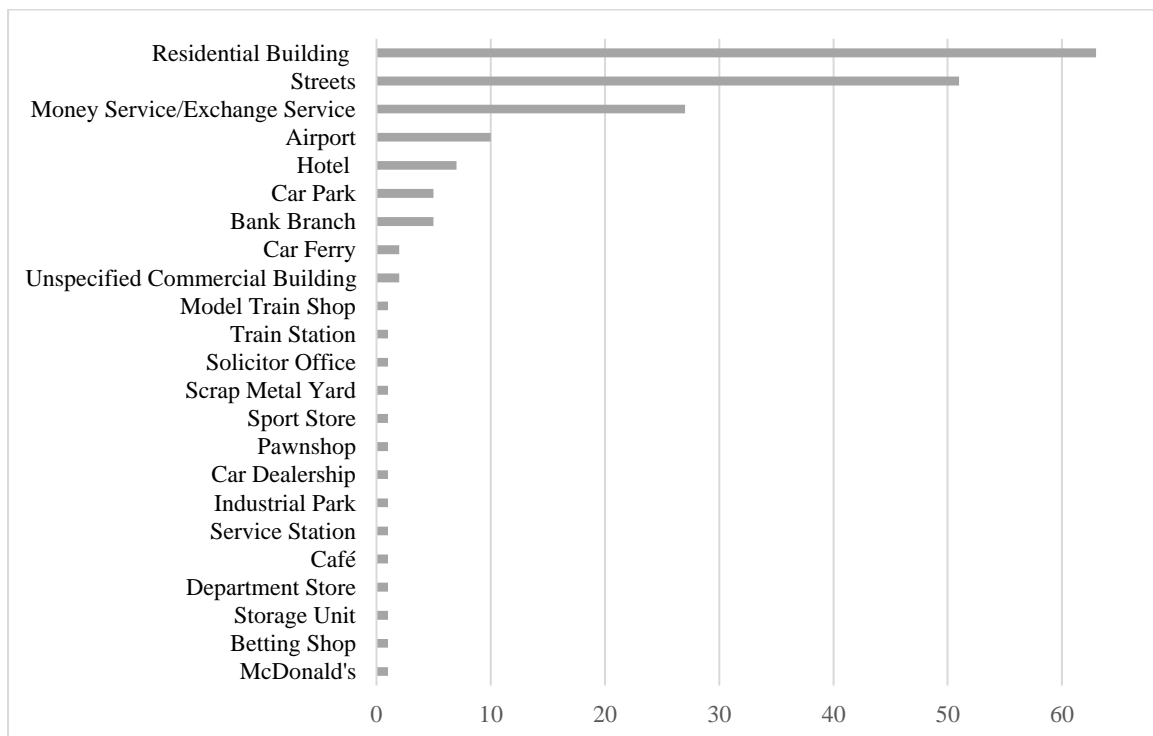
- *Logistical Environment*. The logistical environment of money laundering comprised the associated legitimate businesses and crime-facilitating actors. First, *legitimate*

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businesses associated with offenders were only infrequently reported. Less than one-eighth (*N=47*, 15.6%) of the explored money laundering incidents showed either partial or full collaboration of businesses in the criminal offence. The former entailed information about corrupt employees of an otherwise legitimate business, and the latter involved instances in which entire companies were directly owned by one of the money launderers. Figure 42 shows the frequency distribution of legitimate business types used as front companies for money laundering. Most frequently, currency exchange businesses (*N=9*, 2.95%) and money service businesses (*N=9*, 2.95%) were collaborators in money laundering, offering exchange and transferring currencies, respectively. In other instances, money laundering saw the participation of unspecified corporations (*N=6*, 1.97%). Furthermore, in less than two percent of the examined money laundering incidents, solicitor firms (*N=5*, 1.6%) and motorcycle shops (*N=5*, 1.6%) had links to offenders of the money laundering incident. Additionally, logistics companies (*N=4*, 1.3%) actively participated in money laundering in approximately one percent of the analysed cases. Moreover, in less than one percent of the examined money laundering incidents, lorry sales (*N=2*, 0.7%), real estate agencies (*N=2*, 0.7%), shell companies (*N=2*, 0.7%), and trusts (*N=2*, 0.7%) were active collaborators in processing criminal assets. Lastly, several types of genuine businesses participated in money laundering only once, namely a car dealership (N=1, 0.2%), a holding (N=1, 0.2%), an industrial unit (N=1, 0.2%), a scrap metal and haulage yard (N=1, 0.2%), and a storage unit (N=1, 0.2%).

Figure 42

Legitimate Business Types
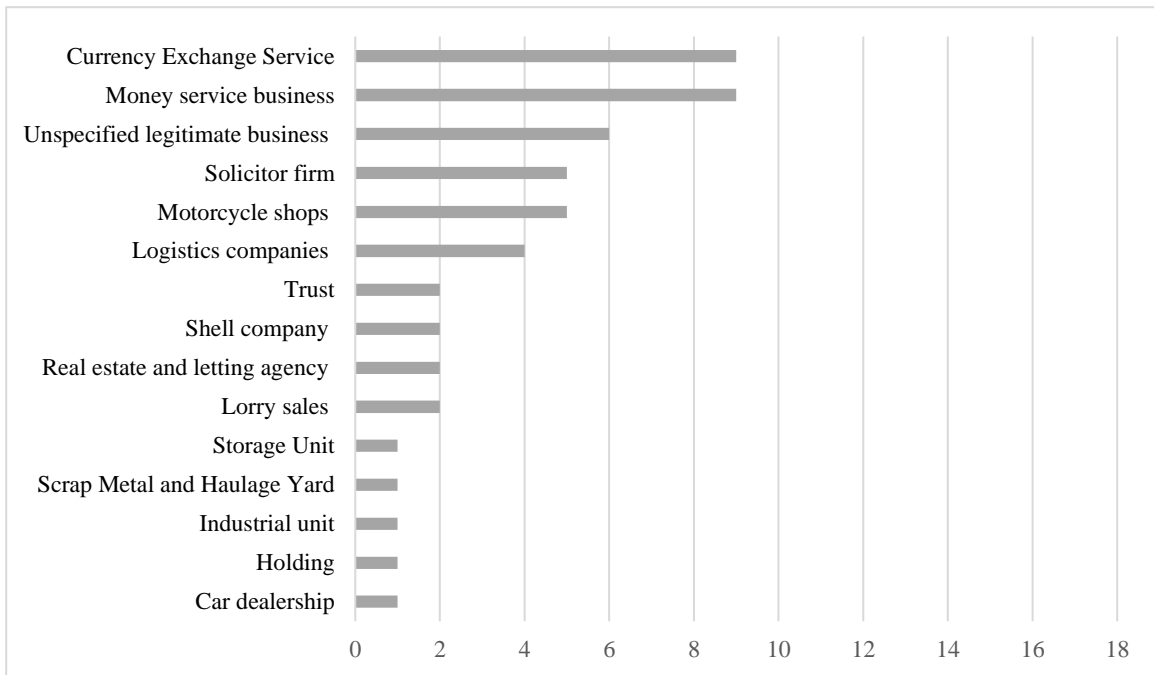
Second, *crime-facilitating actors* were only present during money laundering incidents infrequently. Figure 43 illustrates the frequency distribution of crime-facilitating actors. Most commonly, money laundering incidents saw one or more actors who showed social ties in the form of kinship or friendship to the offenders. Offenders were supported by family and friends in money laundering in approximately one-quarter (*N=82*, 26.89%) of the examined money laundering incidents. Less frequently, the participation of organised crime groups during money laundering incidents was observed. Particularly, organised crime groups were present in less than one-tenth (*N=30*, 9.84%) of the money laundering incidents. Similarly, money laundering incidents only infrequently showed the participation of professionals who can assist offenders with their legal or financial expertise. Professionals provided assistance in a few (*N=26*, 8.5%) of the money laundering incidents.

Figure 43

Crime-Facilitating Actors
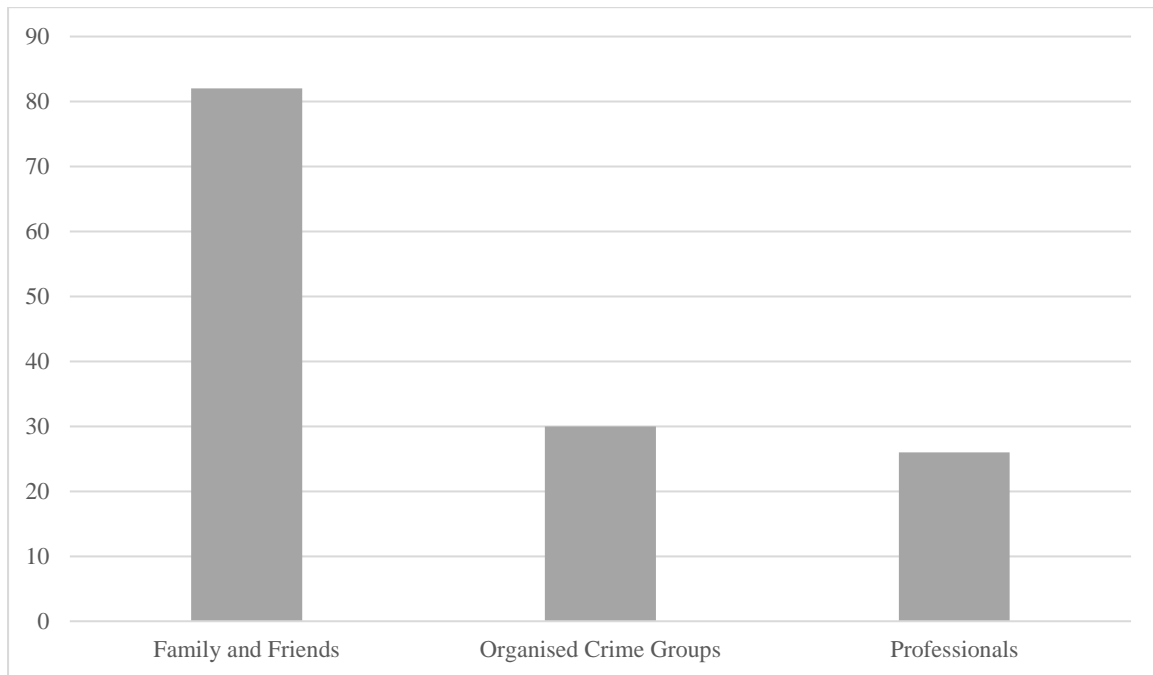
6.3.2 Money-Laundering Crime Events

Conceptually, the key elements of money-laundering crime events are their stages and methods. The descriptive statistics for the stages and methods of 305 money laundering incidents are reported below.

6.3.2.1 Money Laundering Stages. Various stages could be observed across the crime events 305 money laundering incidents. Figure 44 shows the frequency distribution for money laundering stages across incidents. Overall, 11 stages were observed in the examined money laundering incidents. Money laundering stages were not mutually exclusive since any incident could entail multiple configurations. Unexpectedly, money-laundering crime events consisted of only a few stages. On average, only one or two money laundering stages could be observed for a single incident ($M= 1.557$, $SD= 0.822$). Most frequently, money laundering entailed changing ownership, where the nominal ownership of criminal proceeds was transferred to

another individual or company. In more than half (*N=157*, 51,5%) of the money laundering incidents, offenders at least once changed the nominal owners of the criminal asset. In addition, approximately a quarter (*N=84,* 27.54%) of money laundering events entailed one or more activities to store criminal property, in which the offender had put away the illegal proceeds for use in the future. Furthermore, approximately one-fifth (*N=64*, 21%) of money-laundering crime events saw the integration and physical transportation of criminal assets. Here, offenders introduced criminal proceeds into the legal economy or moved assets from one place to another. Nonetheless, some of the identified money laundering stages were less frequently observed. Only approximately one-tenth (*N=29*, 9.5%) of money laundering incidents involved offenders making cash withdrawals from bank accounts to make criminal proceeds untraceable. Similarly, the exportation of criminal assets (*N=22*, 7.2%) outside of England and Wales and the mere possession (*N=18*, 5.9%) of criminal property were only observed in approximately one-twentieth of money laundering incidents. In less than five percent of the cases, placement (*N=12*, 3.9%), layering (*N=12*, 3.9%), justification (*N=11*, 3.6 %), and conversion (*N=7*, 2.3%) of criminal proceeds were observed.

Figure 44

Money Laundering Stages
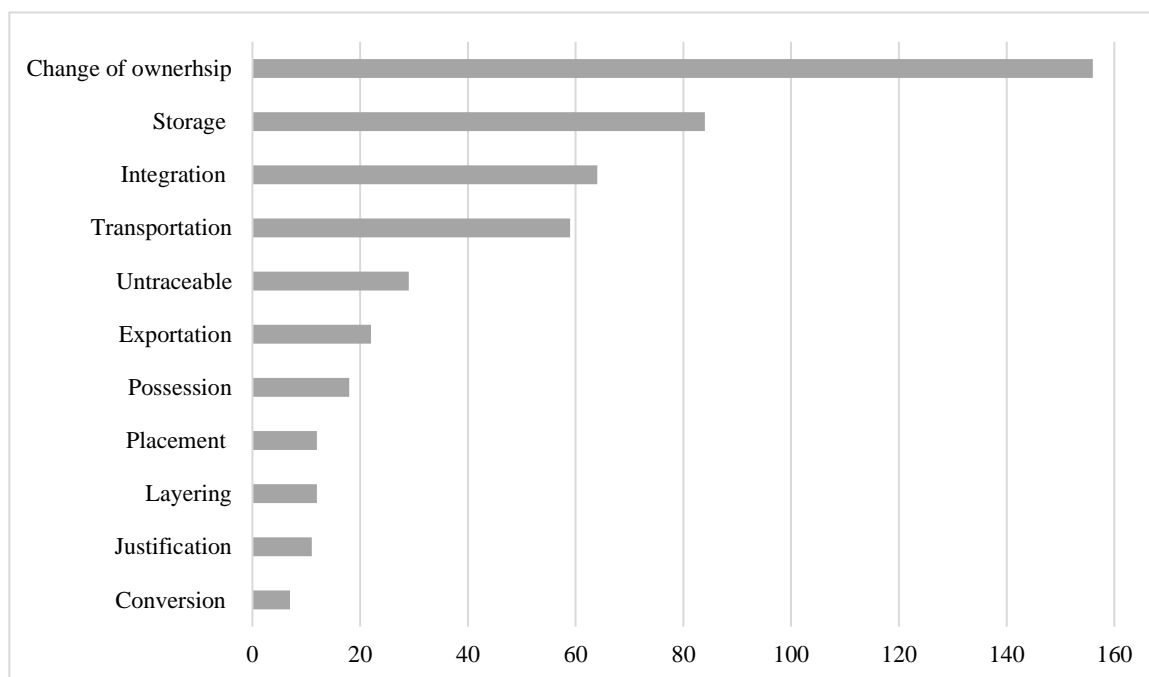
6.3.2.2 Money Laundering Methods. The money laundering methods of 305 incidents included products and services that offenders exploited at a given money laundering stage. Methods differ from the previously outlined legitimate businesses associated with offenders, since criminals misused products and services offered by providers unaware of their criminal activity. Overall, money laundering incidents entailed 18 products and services of a legitimate corporation that offenders exploited. Figure 45 shows the frequency distribution for instruments used across money laundering incidents. Most often, offenders would use cash for money laundering. Approximately four-fifths of the explored money laundering incidents entailed the usage of cash (*N=243*, 79.7%). Here, cash could either be the product of a predicate offence or misused as a means of money laundering. Moreover, money launderers used financial accounts from banks or money service businesses during almost one quarter (*N=75*, 24.6%) of the money laundering incidents. In addition, a rather unexpected finding was the frequent use of one or more vehicles. Approximately one-sixth (*N=51*, 16.7%) of investigated

money laundering incidents saw offenders exploiting vehicles like cars, vans, and trucks at a given stage of the money laundering process. Nonetheless, other legitimate products and services were less frequently exploited as money laundering methods. In detail, less than one-tenth of the money laundering incidents included offenders exploiting wire transfers (*N=29*, 9.5%), cheques/bank drafts (*N=26*, 8.5%), and currency exchange (*N=19*, 6.2%). In under five percent of the money laundering events, criminals made use of phones (*N=14*, 4.6%), safes (*N=7*, 2.3%), cash/safety deposit boxes (*N=7*, 2.3%), credit/debit cards (*N=6*, 1.97%), legal services (*N=4*, 1.3%), cabs (*N=4*, 1.3%), airplanes (*N=4*, 1.3%), vessels (*N=2*, 0.7%), and counting machines (*N=2*, 0.7%). Finally, broker services (*N=1*,0.3%), chauffeur services (*N=1*, 0.3%), and model railway resale (*N=1*, 0.3%) were observed only in a single money laundering event each.

Figure 45

Money Laundering Methods
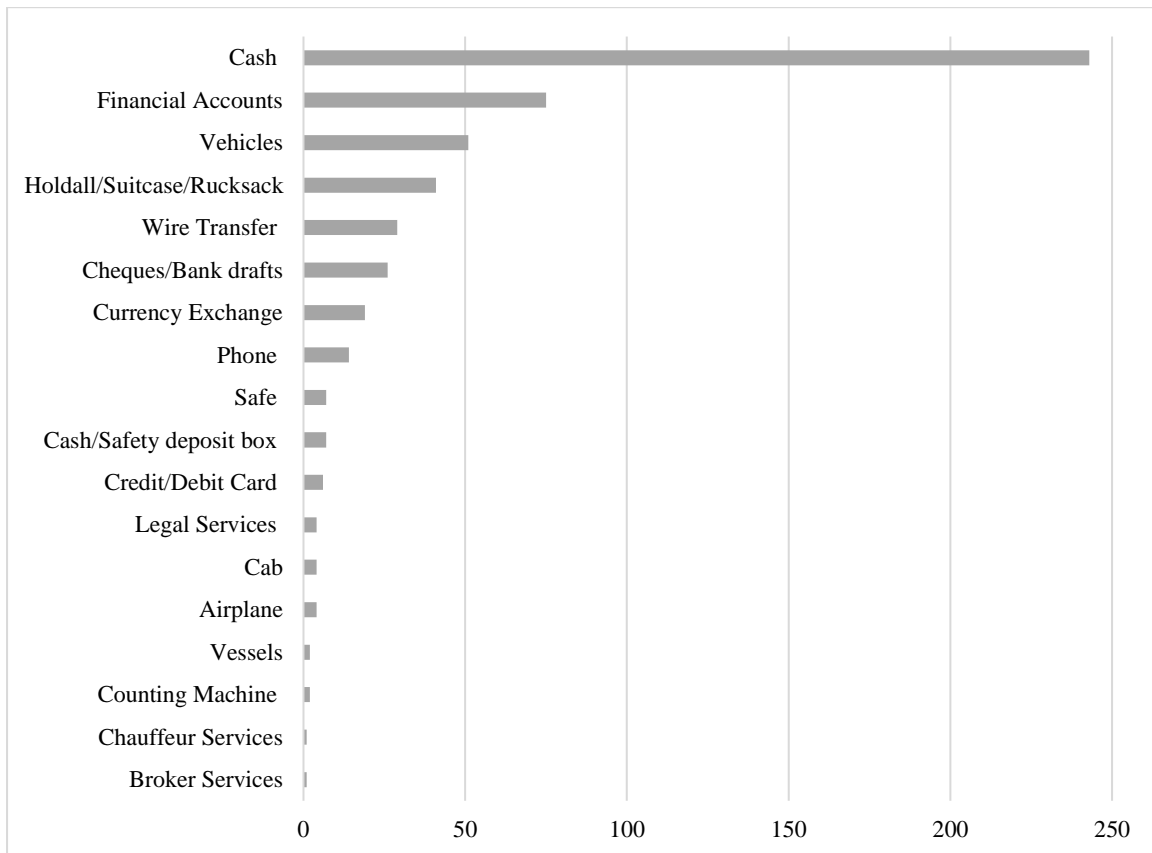
6.4 Discussion

The main goal of this chapter has been to assess the prevalence of characteristics from proximal circumstances and crime events during money laundering incidents. To that end, descriptive statistics for the characteristics of 305 money laundering incidents were produced. The following pages outline the discussion of the nine key findings as well as the strengths and limitations of this description of money laundering incidents.

6.4.1 Key Findings

There are nine key findings from the descriptive statistics summarising the characteristics of money laundering incidents for the proximal circumstances and crime events. Here, the key findings one to five relate to properties of the proximal circumstances, and findings six to nine to the money-laundering crime event. First, *drug trafficking* and *fraud* are the main predicate crimes for money laundering. Approximately 70 percent of the investigated money laundering incidents followed one of these predicate offences, with drug trafficking accounting for the criminal proceeds in 50 percent of the cases. For the most part, these observations are in line with the few existing empirical studies on money laundering, where either drug trafficking or fraud were amongst the most prevalent types of predicate offence (Irwin et al., 2012; S. Schneider, 2004; van Duyne, 2003; van Duyne & Levi, 2005). However, noteworthy differences were registered at the margins. Nine kinds of predicate crimes were identified in the enquiry at hand. Here, thefts and burglaries followed drug-related and fraud offences as the third most prevalent predicate offences across money laundering incidents. The findings are somewhat different from other analyses. For example, Irwin's et al. (2012) analysis showed predicate offences other than drug offences and fraud, including the trafficking of commodities like arms, gold, diamonds, and cigarettes. In summary, the evidence suggests that drug trafficking and fraud are the primary predicate crimes, with little understanding of the other underlying offences that precede money-laundering crime events.

Second, money laundering incidents almost exclusively involve *monetary assets*. From a legal perspective, unlike the name suggests, money laundering is not limited to monetary assets but relates to all forms of criminal benefits. The United Kingdom's legal framework covers all criminal activities' benefits (Proceeds of Crime Act, 2002, Sections 340). In this chapter, however, nearly all the analysed money laundering incidents entailed monetary assets in the form of cash, cheques, or electronic funds already stored in the financial system. These

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findings align with the general understanding in the research and practice, which sees money, namely cash, at the centre of most money laundering incidents (Europol, 2015; Riccardi & Levi, 2018; Soudijn, 2016). Even though these observations are not surprising, the question remains why money laundering primarily involves monetary assets. The simple answer may be that offenders mainly engage in predicate offences that generate money. An alternative explanation is that the data reflect law enforcement's focus on predicate offences such as drug trafficking and fraud that tend to result in monetary outputs. Regardless, research and practice remain primarily interested in monetary assets as targets of money laundering, while non-monetary assets have received little attention.

Third, *legitimate companies* are rarely used as a front for money laundering. In this analysis, approximately 15 percent of the investigated money laundering incidents involved the partial or complete association of legitimate businesses with one or more offenders. Where the participation of legitimate firms could be observed, money service businesses were the most prominent business types. The finding is in line with comments made in official reports, which acknowledge money service businesses as an essential and mostly passive contributor to money laundering (Europol, 2015; Financial Action Task Force, 2016; HM Treasury & Home Office, 2020). However, empirical research examining the specific role of money service companies as a front for money laundering incidents is rare. In that respect, the results of this chapter offer new insights and introduce money service businesses as active participants in money laundering in the academic discourse.

Fourth, *professionals* and *organised crime groups* infrequently participate in money laundering. The common perception today is that money laundering is a crime requiring a high level of professionalism and organisation (Benson, 2020; Bongard, 2001; Levi & Soudijn, 2020; Soudijn, 2016). However, the data analysis of money laundering incidents did not support this view. The participation of professionals and organised crime groups supporting

money laundering was only observed haphazardly. Professional money launderers or organised crime groups were present in less than ten percent of the explored money laundering incidents. Instead, the findings suggest a more significant role of co-offenders with social ties. Criminals relied on friends and family rather than professional money launderers or organised crime groups. Over one-quarter of incidents saw the family and friends support money laundering logistically. These findings are only somewhat connected to current money laundering research. Evidence suggests that co-offenders with social ties are essential for money laundering. In Malm and Bichler's (2013) social network analysis of drug markets, co-offenders with social ties were more common than professionals. Moreover, Soudjin (2010) showed how offenders' wives could aid various stages of the money laundering process. Nevertheless, these studies utilised data from criminal investigations into organised crime, where criminal groups, by implication, are always part of the crime-facilitating environment. Ultimately, it remains open how the academic discourse translates to situations without any involvement of organised crime groups.

Fifth, the *locations* of money laundering are plentiful. In this examination, 23 different money laundering locations were identified. Notably, the crime sites had in common that they represented physical components of the city infrastructure at the street level. Most commonly, money laundering occurred in residential buildings and streets, followed by various commercial buildings. In contrast, money laundering was hardly observed at bank branches, going against the widely held view of criminals carrying bags of cash into banks for deposits (van Koningsveld, 2013, p. 438). The novel findings complement empirical research on money laundering locations at the municipal or country level (Savona & Riccardi, 2017; Vaithilingam & Nair, 2007; Walker, 1999). The most comprehensive study today, taking into account the locations, was conducted by Savona and Riccardi (2017). They compared the money laundering risk for different municipalities in Italy, Netherlands, and United Kingdom. Against

this background, this chapter adds a new perspective to the scientific discussions on where money laundering occurs.

Sixth, money-laundering crime events only include a *small number of stages*. The crime events of the analysed money laundering incident comprised, on average, one to two stages. This finding has important implications for developing a better understanding of how money laundering works. The idea of organising money laundering stages in a rigid sequence is questionable. With money laundering incidents comprising less than two stages, static processes as promoted in the three-stage model (Financial Action Task Force, 2022a) or crime script approach (N. Gilmour, 2014, 2016) seem less plausible. In contrast, the alternative viewpoint promoted in this chapter, where crime events are considered dynamic processes without a predefined sequence of money laundering stages, seems better suited. This alternative view is consistent with Levi and Soudjin's (2020) criticism, who reject the idea of sequential laws and generic crime scripts. Without a fixed series of money laundering stages, the countless manifestations of criminal events are now conceptually captured, allowing investigations beyond the boundaries of the three-stage model.

Seventh, *changing the nominal owners* of criminal assets is a vital part of money laundering. Ownership changes were the most commonly observed money laundering stage during crime events. The stage was observed in over 50 percent of the money laundering incidents. The observation is in line with the findings made by van Duyne (2003) and van Duyne and Levi (2005) in their empirical examination of Dutch money laundering operations, where ownership disguise was the second most common practice. However, money laundering research has yet to acknowledge the importance of deliberate changes in the nominal ownership of criminal assets. So far, ownership changes are only discussed adjacent to the three-stage model or in the context of specific money laundering methods (Chelliah & Prasad, 2017; Irwin et al., 2012; Jancsics, 2017; Riccardi & Savona, 2013; Suendorf, 2001; Unger, 2007).

Therefore, the present chapter highlights the importance of considering changes in the nominal owners of criminal assets as a crucial part of money laundering.

Eighth, money laundering includes *storing* and *transporting* criminal assets. In this chapter, the former was an element in one-quarter of money laundering incidents, the latter in approximately one-fifth. Notably, the storage and transportation of criminal funds took place within the United Kingdom. In contrast, research and practice have viewed the storage and transportation of criminal assets as primarily an international phenomenon. Bulks of cash are seen as being stockpiled and moved aboard (Cassella, 2018; Financial Action Task Force, 2015; Petrunov, 2011; Soudijn, 2016; Soudijn & Reuter, 2016). From this perspective, storage and transportation ultimately serve the purpose of moving criminal assets abroad. However, this view is problematic because the storage and transport of criminal assets also occur during domestic money laundering incidents. In this investigation, the exportation of criminal assets was only observed in a few instances, while storage and transportation were common elements of money laundering incidents. Storing and transporting criminal assets within countries are vital elements of money laundering.

Ninth, money launderers illegally use *financial and non-financial instruments*. Unlike companies that actively collaborate in money laundering incidents, offenders can also exploit legal products and services without the knowledge of the respective provider. In this chapter, money launderers exploited 18 methods, which can be distinguished into financial or non-financial instruments. *Financial instruments* are products and services offered inside the financial system to invest and support commercial activity (International Monetary Fund, 2006, p. 11). In this study, these products and services comprised broker services, cash, safety deposit box, cheques, credit/debit card, currency exchanges, financial accounts, and wire transfers. Conversely, *non-financial instruments* are everyday products and services that do not aim at facilitating investments and commercial activity and are offered outside the financial

system. This category included aeroplanes, cabs, chauffeur services, counting machines, holdalls, legal services, model railway resale, phones, safes, vehicles, and ships. Typically, research and practice have been focused on money laundering through the financial system (Bongard, 2001; European Commission, 2017, 2019; Levi, 2002; Levi & Reuter, 2006; Reuter & Truman, 2004; Riccardi & Levi, 2018; Steinko, 2012; Teichmann, 2019). On the other hand, the abuse of non-financial instruments has hardly been studied. In this way, this chapter offers a complementary view to the discussion on money laundering methods with its focus on financial instruments.

6.4.2 Strengths and Limitations

The strengths and limitations of the descriptive analysis of money laundering incidents are outlined below. The *strengths* of this chapter are conceptual and empirical contributions. *Conceptually*, the conceptual framework was further developed by incorporating the suspected mechanisms between the proximal circumstances and money-laundering crime events. The crime event was specified as a dynamic process, which allows for countless arrangements of money laundering stages and related methods. *Empirically*, the chapter offered fresh perspectives on already known factors of money laundering incidents, such as the involvement of professionals and organised crime, associated legitimate companies, and predicate crimes. Equally important, the chapter also offered important new insights into the underexplored properties of money laundering incidents, like crime sites, the stages of ownership changes, and non-financial instruments. Together, the conceptual and empirical contributions are the strong points of this chapter.

The *limitations* of this analysis were methodological. The methodological limitation of this chapter is linked to data processing, which heavily relies on human decision-making. As

discussed in the previous chapters, using court files as the primary data source of this study is a messy process and requires the researcher to make many decisions on the way to the final dataset. In this chapter, information from sample 1 was further processed to enable the exploration of the proximal circumstances and crime money laundering incidents. Quasi-sentences found in full judgment transcripts were manually paired and recorded. However, manual pairing and coding can affect reliability due to the reliance on human decision-making. Potential negative impacts were mitigated by a transparent data transformation process, where each step was explained in detail. Codes were created based on analyses of the previous chapters, providing maximum transparency.

6.5 Conclusion

The chapter has aimed to assess the prevalence of features from the proximal circumstances and crime events during money laundering incidents. The study entails some unique contributions conceptually and empirically, offering a new perspective on the interplay of central properties of money laundering incidents. However, the descriptive statistics only summarised the prevalent properties of proximal circumstances and money-laundering crime events. To better understand how money laundering works, the next chapter aims to create a classification of money laundering incidents based on the characteristics of proximal circumstances and crime events.

Chapter 7:

A Classification of Money Laundering Incidents

Money laundering research has heavily relied on the three-stage model to describe the money laundering process. There is an argument to be made that the popularity of the three-stage model is mainly founded on its practicality in making money laundering more accessible. For instance, Reuter and Truman (2004, p. 25) pointed out that understanding money laundering as a three-stage model is a helpful breakdown of otherwise complex processes. However, the conceptual framework of this thesis in its current form lacks a similar appeal. The many components and sub-components of the proximal circumstances and crime events have enabled in-depth analyses of money laundering incidents. Compared to the three-stage model, the gain in accuracy has come at the cost of accessibility. As a result, the chapter's main objective is to group money laundering incidents in a meaningful manner, making them more accessible.

In this thesis, a new classification of money laundering incidents is created. The current understanding of money laundering as a three-stage process has been criticised for its weak scientific underpinning, including shortcomings in the theoretical foundation, empirical support, and research practice. In stark contrast, this chapter aims to create a classification of money laundering incidents, avoiding the current approach's pitfalls. Throughout this thesis, the money laundering properties outlined in court transcripts were conceptualised and analysed from the crime science perspective. In the final step, these insights are used to create a new classification of money laundering incidents.

The classification of money laundering incidents is based on data. Hierarchical clustering is used to find meaningful groups of money laundering incidents in the data from England and Wales. Cluster analysis is a numerical technique specifically designed to identify groups or classes in data based on similarities. The agglomerative hierarchical method used in

this chapter represents a distinct form of cluster analysis, where classification is achieved through a series of partitions beginning with individual cases (Aldenderfer & Blashfield, 1984; Everitt et al., 2011; Han et al., 2012; Kaufman & Rousseeuw, 2005). With the application of hierarchical clustering, this chapter promotes a classification of money laundering incidents based on data.

Hierarchical clustering is performed for money laundering incidents targeting monetary assets. Sample 2 comprises a combination of categorical and continuous variables on money laundering incidents concerning monetary and non-monetary criminal assets. However, the data in sample 2 needs to be transformed to enable hierarchical clustering. First, due to theoretical and methodological considerations, ten money laundering incidents involving non-monetary criminal assets are excluded from the analysis. Second, cluster analysis procedures work best for data that is either categorical or continuous. Hence, continuous variables are transformed into binary variables. The agglomerative hierarchical clustering is performed on 295 money laundering incidents involving monetary assets.

Four classes of money laundering incidents were found in the data. The agglomerative hierarchical clustering identified four classes of money laundering incidents in data, where each category comprised a unique mix of properties from the proximal circumstances and crime events. The defining characteristics of the classes of money laundering incidents constituted the predicate crime of fraud, the use of currency exchange services, as well as the money laundering stages of storage and transportation of criminal assets. The four classes of money laundering incidents have little in common with the standard three-stage model and offer a new perspective on how money laundering works.

This chapter is organised as follows: Section one includes the literature review using money laundering research to explain the potential drivers behind the classification of money

laundering incidents. Section two outlines the research method, including the data transformation and cluster analysis procedure used for this study. Section three includes the results of the clustering. Section four covers the discussion of key findings and strengths and limitations of this enquiry.

7.1 Literature Review

The academic literature comprises only a few empirical studies aiming to understand the relationship between properties of money laundering incidents. However, the *predicate offence* and the *volume of criminal assets* are considered factors that can affect how money laundering occurs. The following pages outline the significance of predicate offences and the volume of criminal assets for classifying money laundering incidents.

7.1.1 Predicate Offence

From an analytical perspective, predicate crimes hold important implications for money laundering incidents. A common assumption in money laundering research is that the category of predicate crime affects how money is laundered. Nevertheless, few empirical studies have investigated the relationships between predicate crime and money laundering methods. Van Duyne (2003) observed different money laundering practices for the predicate offences of drug trafficking and fraud in his seminal investigation of Dutch criminal files:

> It is not surprising to observe the highest frequency of placement of cash in the drug cases, as this is a cash based business… In the cases of fraud and economic crime the cash or placement phase could better be termed 'displacement', as the concern of the business crime-entrepreneurs was to get the money out of the financial system. (van Duyne, 2003, p. 86)

Over the years, money laundering research has adopted the view that predicate crimes affect how money is laundered (Irwin et al., 2012; Levi & Reuter, 2006; Levi & Soudijn, 2020; Reuter & Truman, 2004; Rusanov & Pudovochkin, 2018; Unger & den Hertog, 2012; van Duyne, 2003, 2013). Today, money laundering incidents are often distinguished and classified based on the different types of predicate crimes.

Regardless, the underlying mechanisms of this relationship remain vaguely understood. No empirical study has aimed to trace the steps from predicate offence to the subsequent money-laundering crime event. The scientific literature yet offers sets of plausible suspected mechanisms at play. Levi and Soudijn (2020) list various factors of the predicate crime with the potential to affect the subsequent components of money laundering:

> As explained below, different types of crime have different financial aspects, including the type of payment, the need to pay people extraterritorially, the visibility of the crimes to victims or to the authorities, and the elapsed time before financial investigation occurs (if it ever does). (Levi & Soudijn, 2020, pp. 589–590)

The factors mentioned above and their expected impact on the other components of the money laundering incident are theoretical and require empirical examinations. Nonetheless, the scientific debate offers essential insights into the expected impact of predicate crimes and their consequences for classifying money laundering incidents.

Money laundering incidents sharing the predicate offence can be grouped. If the mechanisms of the predicate offence are indeed at work, the proximal circumstance and the money-laundering crime event can be expected to share commonalities. However, the predicate offence affects the critical components of money laundering incidents differently. For one thing, the predicate offence might affect proximal circumstances directly, as outlined in chapter 5 (Levi & Soudijn, 2020; Malm & Bichler, 2013; Soudijn, 2014). For another thing, money-

laundering crime events are affected only indirectly through the proximal circumstances. Overall, the predicate offence can be expected to shape the proximal circumstances directly and crime events indirectly, forming a distinct class of money laundering incidents.

7.1.2 Volume of Illegal Proceeds

To a lesser extent, the academic literature outlines the relationship between the volume of illegal proceeds and money laundering. There is hardly any empirical work on the volume of criminal proceeds and its impact on money laundering. Where the relationship is explored, the suspected relationship assumes that the higher the volume of criminal proceeds, the more sophisticated the money-laundering crime event. For example, Irwin et al. (2012), examining 146 typologies obtained from several official reports, found partial evidence in support of this relationship:

> To determine if there was any relationship between the number of placement techniques employed by each of the money laundering types and the sums of money that they laundered, a cross-comparison was conducted on the data. No clear relationship could be found. However, there was a high degree of correlation between the number of layering techniques utilised and the sums of money that were laundered. (Irwin et al., 2012, p. 99)

Likewise, Hancock and Laycock (2013) interviewed law enforcement personnel from United Kingdom agencies to explore the dynamics of organised crime and noted the following about their money laundering activities:

> It was clear, however, that once the groups started to generate more cash than could be spent day to day they needed to and in every case did seek to conceal the money by

means as diverse as gambling in Holland and buying a cleaning business. (Hancock &
Laycock, 2013, p. 182)

The academic literature contains some evidence to suggest that the volume of illegal proceeds indeed affects how money laundering occurs.

Notwithstanding, the mechanisms underlying the above relationship are not studied. There are no empirical studies attempting to specify and examine the chain of events caused by the volume of illegal proceeds. Instead, the academic literature contains assumptions about potential reasons. Levi and Soudijn (2020, p. 594) argued that the amounts of criminal assets create different requirements an offender has to meet, ultimately affecting the money-laundering crime event. With no evidence to support the suspected processes following the volume of illegal proceeds, the impact on other properties of the money laundering incidents remains theoretical. That being said, for the present analysis, these assumptions hold important implications. Suppose the volume of illegal funds affects the money-laundering crime event. Money laundering incidents involving similar amounts of criminal assets can be expected to look alike.

7.2 Method

The main goal of this chapter is to classify money laundering incidents in a meaningful manner. To that end, the original data in sample 2 needs to be transformed before performing an agglomerative hierarchical clustering. The following pages detail the data transformation and data analysis procedure to classify money laundering incidents.

7.2.1 Data Transformation

The information for this analysis was taken from sample 2. Additional modifications to both cases and variables were required to enable data analysis. The individual steps of data transformation are outlined below.

7.2.1.1 Case Selection. Not all money laundering incidents in sample 2 were considered helpful for classifying money laundering incidents. Sample 2 contained money laundering incidents of monetary- and non-monetary criminal assets. Mainly, money laundering incidents target money, with only a small number of incidents concerning non-monetary criminal assets such as stolen vehicles, computer equipment, and mobile prepaid cards. These non-monetary assets created three issues for the analysis in this chapter. First, the available academic literature typically discusses money laundering cases where offenders process monetary assets and ignores non-monetary assets. Consequently, assumptions about the predicate crime and volume of illegal proceeds only apply to monetary assets. Second, the volume of monetary and non-monetary assets cannot simply be compared. To illustrate, the ten notes of a given currency differ substantially from ten stolen cars. Due to the differences, monetary and non-monetary assets were deemed not comparable. Third, only ten of 305 money laundering incidents did refer to non-monetary criminal assets. The above theoretical and methodological implications of including ten non-monetary money laundering incidents were considered out of proportion to the potential benefits. Given these points, the decision was made to limit this investigation to 295 money laundering incidents connected to criminal monetary assets.

7.2.1.2 Variables. In this study, cluster analysis methods were used to classify money laundering. Cluster analysis procedures work best when the data in question covers either categorical or continuous variables (Everitt et al., 2011; Han et al., 2012; Kaufman & Rousseeuw, 2005; Yim & Ramdeen, 2015). However, sample 2 comprised a mix of categorical

and continuous variables. Although most variables are categorical scales, information about the volume of crime money is continuous. The presence of categorical and continuous variables in the same dataset posed a challenge for the data analysis.

Continuous variables were transformed into binary variables. There was no standard approach available in the methodological literature for designing cluster analyses for datasets that contain a mix of continuous and categorical variables. Everitt et al. (2011, p. 69) outlined three approaches for mixed datasets, where all variables are transformed into binary data, continuous data, or a coefficient that allows considering all variables. The latter included further decisions on whether and how to weigh variables. For this analysis, continuous variables were transformed into binary variables for three reasons. First, transforming continuous variables into binary data was a generally accepted approach to enable cluster analysis (Altman & Royston, 2006; Cumberland et al., 2014; Fedorov et al., 2009). Second, binary-coded categorical variables reflected the predominant data type, with only two continuous variables. As such, it was deemed more practical to dichotomise two continuous than the other way around. Third, weighting variables to create a specific coefficient was not considered valuable since the empirical evidence to inform if and how to weigh variables was missing. Given these points, continuous variables were transformed into binary codes.

The variables relating to criminal assets were dichotomised. The methodological literature typically suggests performing a median split to transform continuous data into binary variables. Here, the continuous variable is divided into two groups using the sample median, creating a low and high group of the variable (Altman & Royston, 2006; Fedorov et al., 2009; Rucker et al., 2015). In this chapter, dichotomising involved two steps: First, the median was calculated for the amount of illegal proceeds (*Mdn*=£60,000). Second, new binary variables were created for each half of the median split resulting in two new variables in the dataset. The final dataset entailed 64 variables related to 295 cases of money laundering.

7.2.2 Data Analysis

The analytical strategy followed a cross-case design to classify money laundering incidents of sample 2 in a meaningful manner. Table 7 summarises this chapter's analytical strategy, purpose, case unit, and intended product. Money laundering incidents and their properties were compared *across cases* to find classes in data using hierarchical clustering, a numerical procedure designed to categorise information based on similarities. Moreover, where contextual information was needed, the interplay of money laundering properties was examined *within* the confines of individual incidents.

Table 7

Cross-Case and Within-Case Strategies: Cluster Analysis

Analytical Strategy	Purpose	Case	Product
Cross-Case and Within-Case Analysis	Finding similar money laundering incidents	Money laundering incident	Classes

Two factors made cluster analysis the preferable data analysis procedure for classifying money laundering incidents. Most importantly, cluster analysis is a well-established numerical technique to identify groups in data and, as such, has been specifically designed to create classifications of real-world phenomena (Aldenderfer & Blashfield, 1984; Everitt et al., 2011; Han et al., 2012; Kaufman & Rousseeuw, 2005). Furthermore, inferential statistical procedures were not suitable for the data used in this thesis. Court transcripts could contain information related to multiple counts of money laundering. Though the depictions of judges referred to money laundering incidents related to different criminal assets, they often showed overlaps in the participating offenders on trial. Statistical independence could, therefore, not be assumed, and inferential procedures were considered unsuitable since they would have put the analysis at risk of producing misleading results (Chen & Zhu, 2001, pp. 420–426). Under those

circumstances, a cluster analysis was considered the preferred data analysis procedure to classify money laundering incidents. The following pages outline the cluster analysis procedure and software application.

7.2.2.1 Cluster Analysis Procedure. No single cluster analysis procedure can be considered ideal under all circumstances. Instead, the available data type and the research objective determine the design of the cluster analysis procedure (Aldenderfer & Blashfield, 1984; Everitt et al., 2011; Kaufman & Rousseeuw, 2005). For this investigation, choosing the adequate procedure for cluster analysis entailed six steps: First, *hierarchical clustering methods* were selected. Methodological publications distinguish between partitioning and hierarchical clustering methods. The former entails assigning cases to a predefined number of mutually exclusive groups or clusters. The latter consists of a series of partitions where an algorithm creates an unknown number of clusters (Bailey, 1994; Everitt et al., 2011; Kaufman & Rousseeuw, 2005). In this thesis, hierarchical clustering was deemed more appropriate. Determining the ideal number of clusters beforehand was neither justifiable nor desirable since the new money laundering classification should reflect the data rather than the other way around. Moreover, the hierarchical clustering output entails dendrograms, which mirror evolutionary trees and are useful tools to visualise the steps of classifying data. Choosing hierarchical clustering over partitioning methods was therefore considered the best approach.

Second, *agglomerative* hierarchical clustering methods were chosen. Agglomerative and divisive techniques are two forms of hierarchical clustering. The agglomerative approach starts with individual cases and groups them successively until all cases are part of a single cluster. Conversely, the divisive approach starts with a single cluster and gradually divides it into smaller units until only individual cases are left. For the present analysis, agglomerative hierarchical clustering was chosen over divisive procedures because they are the more established clustering method (Everitt et al., 2011; Kaufman & Rousseeuw, 2005; Yim &

Ramdeen, 2015). However, agglomerative hierarchical clustering is not a single procedure. Different measurements are available to define the distance between two cases and groups of cases that can result in different outcomes (Everitt et al., 2011, p. 43). The different operations to determine the distance between cases and clusters required further consideration.

Third, the *Jaccard coefficient* was selected as a distance measurement between cases. Central to uncovering clusters in data is finding out how close two individual cases are to one another. To that end, the methodological literature offers many measurements to capture the distance between two cases. The dataset used in this thesis contained exclusively binary data, where zero stands for the absence and one for the presence of variables. Here, selecting a suitable distance measure for binary data was based on how they treat the absence of properties. Specifically, the measures differ as to whether they consider the absence of a variable to be important for determining the distance between two cases (Everitt et al., 2011, p. 46). In this analysis, the absence of attributes was considered unsuitable for measuring the distance between two cases. Offenders have countless alternatives to commit money laundering, and by implication, the presence of one feature is always accompanied by the absence of many others. Treating cases as similar simply because they lack certain attributes was therefore not considered a useful alternative for this analysis since this was seen as an intrinsic feature of money laundering. With the Jaccard coefficient ignoring the co-absence of variables when comparing two individual cases, it was the preferred distance measurement for this cluster analysis.

Fourth, *Ward's method* was used to combine clusters. Once two or more cases form a cluster, different distance measurements are needed. Agglomerative hierarchical clustering offers various alternatives to form groups of cases, each with distinct mathematical properties. Ward's (1963) method was selected to form clusters in this thesis because it ranks among the most established procedures and outperforms other measures when applied to binary data.

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Ward's formula merges two clusters by ensuring that the fusion will raise the in-group variance as little as possible. The fusion process continues until no clusters are left (Aldenderfer & Blashfield, 1984; Amorim, 2015; Everitt et al., 2011; Finch, 2005; Han et al., 2012; Hands & Everitt, 1987; Yim & Ramdeen, 2015).

Fifth, the number of clusters was determined using *dendrograms* and *silhouettes*. Any cluster analysis entails selecting the number of clusters that reduces data complexity and offers enough analytical value to answer the research questions. Han et al. (2012, p. 486) describe this part of the cluster analysis as finding a good balance between compression and accuracy. Unfortunately, there was no generally agreed-upon standard procedure to determine the optimal number of clusters available in the methodological literature (Aldenderfer & Blashfield, 1984; Clatworthy et al., 2005; Everitt et al., 2011; Han et al., 2012). In this thesis, dendrograms and silhouettes were created to find the optimal number of clusters for this analysis. Dendrograms illustrate each stage of the hierarchical clustering process, including *nodes* and *stems*. Nodes are new clusters, and the length of the stems indicates the distance from where a new cluster is formed. Here, sudden increases in the stem length between nodes suggest a preferable number of clusters (Everitt et al., 2011, p. 88). Additionally, average silhouettes were calculated to identify the optimal number of clusters. Silhouettes were introduced by Rousseeuw (1987) as a representation of how well cases fit into their assigned cluster. To that end, the average distance between an individual case and all members of a cluster is compared to the average distance of the same cases to all cases outside the cluster. The resulting score can range from -1 to 1. The former suggests that the case is closer to objects outside the assigned cluster, whereas the latter suggests perfect alignment with cases inside the cluster (Everitt et al., 2011; Han et al., 2012; Kaufman & Rousseeuw, 2005; Rousseeuw, 1987). Together, dendrograms and silhouettes informed the decision on the best number of clusters for the present dataset.

Sixth, the *cluster properties* were defined using descriptive statistics. Clusters are polythetic classes. Unlike monothetic classification, where all objects appear identical across all variables, the cases in polythetic classifications share only some similarities (Bailey, 1989, 1994; Romesburg, 2004; Sokal, 1974). The consequence is that once the formation of clusters is completed, it must be clarified where they are most similar and where they are not. However, the scientific literature did not offer a standard procedure for this step. Milligan and Cooper (1987, p. 347) have pointed out that it is logical at this stage of cluster analyses to rely on descriptive statistics to understand the variables shaping individual clusters. In this thesis, identifying essential cluster properties was achieved by comparing the features of money laundering incidents across clusters. Percentages were used to describe the fraction of money laundering incidents in clusters sharing a given property. Next, percentages were compared across clusters. The comparison enables the unique cluster properties to be distinguished from those features common to all clusters. Characteristics unique to money laundering incidents of a single cluster were considered *defining properties*. On the other hand, features common to money laundering incidents across multiple clusters were considered *shared properties*. In the absence of any guidance, the practical decision was made to exclude properties present in less than ten percent of cases within clusters from the analysis.

Lastly, the *cluster configurations* were determined. Polythetic classes of cases only have some characteristics in common. By implication, cases of the same group can differ concerning characteristics, despite showing many similarities. Accordingly, the last part of the analysis aims to identify the properties unique to individual clusters. To this end, those properties common to multiple clusters were excluded. The rationale behind excluding shared characteristics from the analysis was to focus only on those properties that make each cluster unique. The different configurations of cluster-defining properties created the foundation for developing a classification of money laundering incidents.

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7.2.2.2 Software Application. The cluster analysis was conducted in Orange Data Mining, an open-source data analysis tool created by the University of Ljubljana (2021). The software application was ideal for performing the hierarchical clustering of money laundering incidents due to unrestricted access, user-friendliness, and powerful data visualisation. First, as an open-access software, the application was not hidden behind a paywall and could be used by anyone. Second, the software was user-friendly and did not require any programming knowledge. Instead, the application used sets of widgets that could be combined into a workflow to extract insights from data. Third, with its strong emphasis on data visualisation, the software enabled charts, graphs, and tables to be generated instantaneously. Specifically, the dendrograms were easy to read and, as such, for convenient visualisation of the hierarchical clustering. Figure 46 shows the cluster analysis workflow in Orange Data Mining for the present analysis.

Figure 46

Hierarchical Clustering Workflow in Orange Data Mining
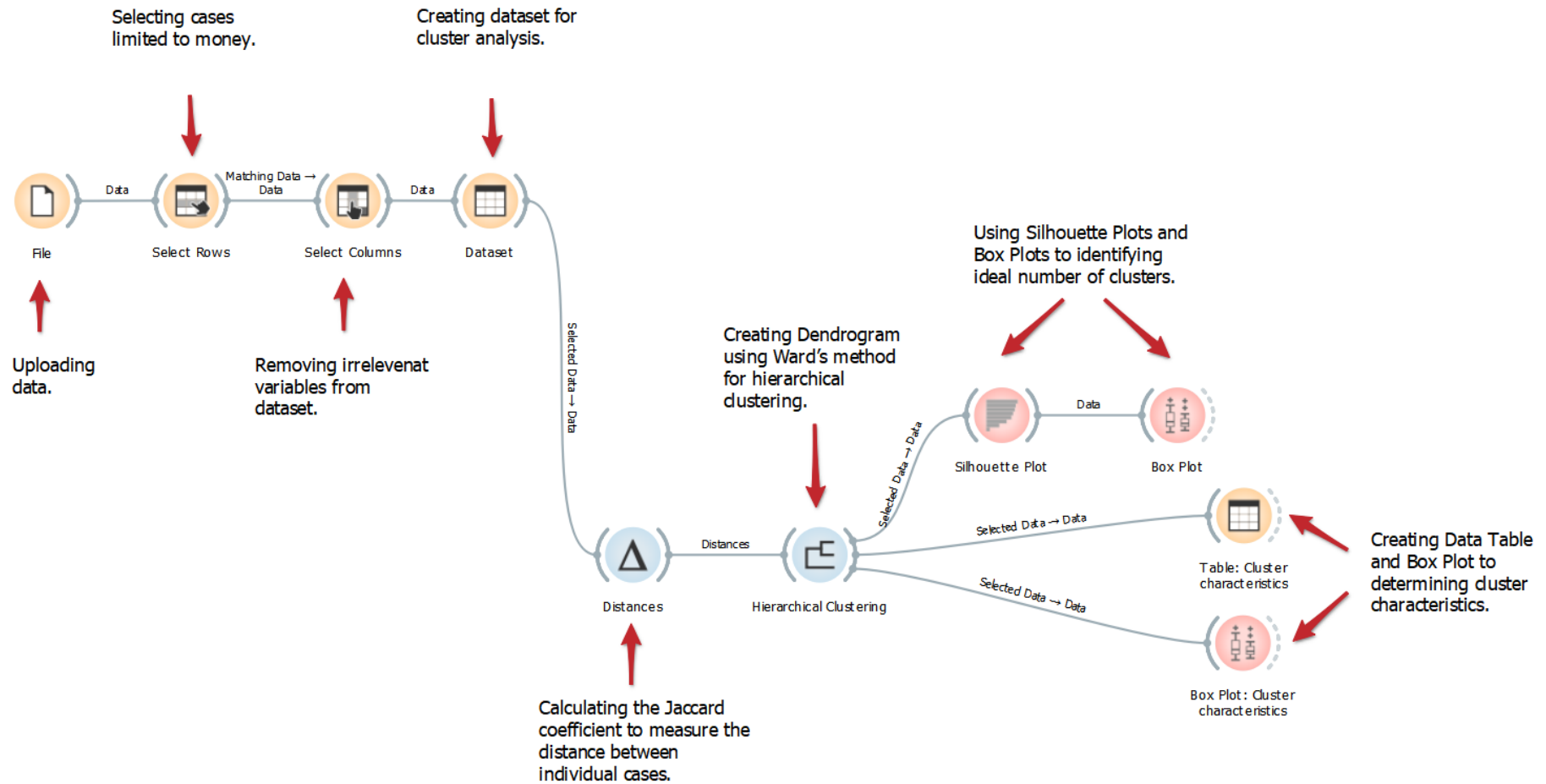
7.3 Results

An agglomerative hierarchical cluster analysis of 295 money laundering incidents from England and Wales was conducted to classify incidents in a meaningful manner. The first part of this section presents the steps taken to determine the ideal number of clusters using dendrograms and silhouette plots. The second part reports the properties of the individual clusters. The last part brings together the essential characteristics of the individual clusters, thereby defining the distinct money laundering classes.

7.3.1 Number of Clusters

The ideal number of clusters was determined in two steps using dendrograms and silhouettes. First, a dendrogram was created in Orange Data Mining using the Hierarchical Clustering widget. Figure 47 shows the cutting point in the dendrogram for the agglomerative hierarchical clustering of 295 money laundering incidents. The dendrogram begins with the individual cases on the bottom and ends with all incidents merged into a single cluster on the top, illustrating the clustering process. The visualisation of the clustering process did suggest a solution that could be considered ideal for this dataset. Sudden changes in the length of the stems could be observed, indicating an ideal cutting point. The vertical axis displaying the distance among cases and clusters showed an abrupt increase in stem length around three, highlighted by the horizontal blue dashed line in the dendrogram. Cutting the dendrogram at a distance of three would result in four clusters. Based on the dendrogram as a visual tool, the four-cluster solution was considered the optimal number of clusters for the data on 295 money laundering incidents.

Figure 47

Dendrogram: Cutting Point
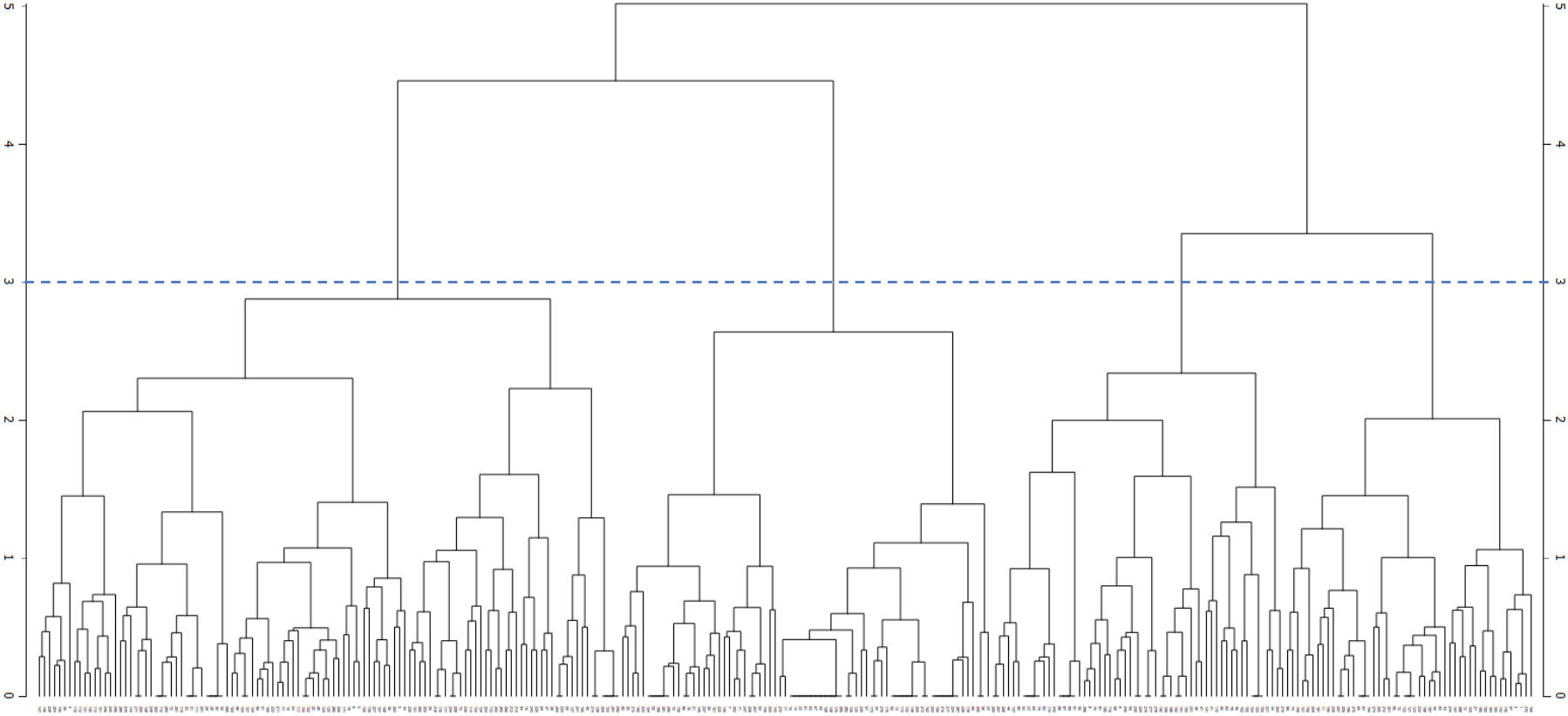
Second, in addition to the above dendrogram, average silhouettes were calculated to determine the ideal number of clusters for the 295 money laundering incidents. Average silhouette scores were produced in Orange Data Mining[5] and compared for different numbers of clusters ranging from two to ten. Table 8 reports the average silhouette scores for up to ten clusters. The lowest average silhouette score of 0.118653 was returned for grouping money laundering incidents into six clusters. On the other hand, dividing money laundering incidents into ten clusters showed the highest mean silhouette score of 0.151394, indicating the dataset's optimal solution. Consequently, the optimal cluster solution suggested by the mean silhouette score differed from the four-cluster solution indicated by the dendrogram.

Table 8

Average Silhouette Scores

Number of clusters	Average Silhouette Score
2	0.135744
3	0.124183
4	0.140693
5	0.14106
6	0.118653
7	0.127757
8	0.135614
9	0.147309
10	0.151394

Additional considerations were necessary to identify the best way to classify money laundering incidents. The decision was made to search for cluster solutions considered preferable in both the dendrogram and the mean silhouette scores and which achieve a good balance between compression and accuracy. In this thesis, the four-cluster solution was

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[5] To generate the different silhouette scores in Orange Data Mining, the Silhouette Plot widget was combined with the Box Plot widget. The former allowed the generation of the silhouettes determining Euclidian distance for the given number of clusters, the latter producing a box plot including the average silhouette score for each cluster solution.

considered preferable. Based on the mean silhouette score, the four-cluster solution ranked only fourth optimal after the five-, nine- and ten-cluster solutions. However, the nine-and ten-cluster solutions were considered too granular to create a meaningful classification of money laundering incidents. Leaving the four- and five-cluster solutions as the most viable options, the four-cluster solution was selected because the dendrogram also suggested this partitioning. Overall, the four-cluster solution was chosen as a good compromise between simplification and accuracy for classifying the money laundering incidents in England and Wales. With a silhouette score under 0.2, the clusters should be regarded as partially overlapping. The following section presents the defining cluster properties.

7.3.2 Cluster Properties

The agglomerative hierarchical clustering of 295 money laundering incidents resulted in four different-sized clusters. Figure 48 shows the dendrogram with the highlighted four-cluster solution. The smallest class with 49 money laundering incidents was cluster I in blue. The medium-sized groupings were cluster II in red, covering 58 money laundering incidents and cluster III in green consisting of 73 cases. The largest grouping with 115 money laundering incidents was cluster IV in orange. The following pages outline the properties of the money laundering incidents per cluster, including features from the proximal circumstances and crime events. Comparing case characteristics across clusters, the properties that define the classes of money laundering incidents can be distinguished from features shared across multiple clusters.

Figure 48

Dendrogram: Four-Cluster Solution
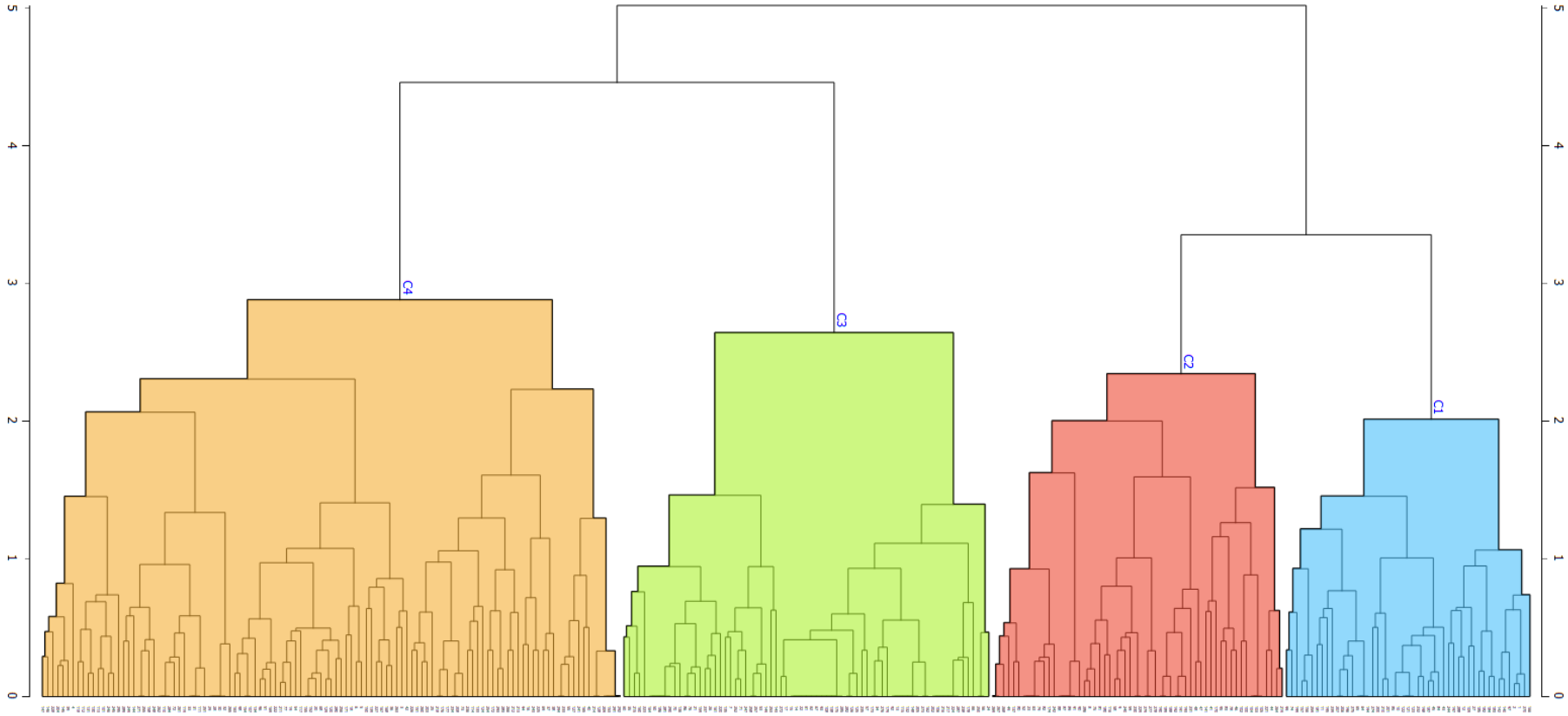
7.3.2.1 Proximal Circumstances. Key components of the proximal circumstances comprised the predicate offences, target, and environment, including location, associated businesses, and logistical factors. First, the predicate offences were both defining and shared properties amongst clusters. Table 9 shows the predicate offence classes for clusters I-IV. *Drug trafficking* appeared as a shared property between clusters II-IV. Over three-fifths of the money laundering incidents in each cluster were associated with drug-related offences. By way of comparison, *fraud* as the predicate offence was a defining property of cluster I. Almost all money laundering incidents in cluster I originated in fraud, while the predicate crime category was hardly found in clusters II-IV. As such, fraud is a defining property of cluster I. Lastly, the other predicate offence types were hardly observed. Except for drug trafficking and fraud, all predicate crime categories were present in less than ten percent of the cases for clusters I-IV. As such, they could be neither considered defining nor shared cluster properties.

Table 9

Predicate Offences per Cluster

Predicate Crime	Cluster I (N=49)	Cluster II (N=58)	Cluster III (N=73)	Cluster IV (N=115)
Cigarette smuggling	0%	0%	0%	3.48%
Corruption	0%	1.72%	0%	0%
Drug trafficking	2.04%	**60.34%**	**75.34%**	**60%**
Fraud	**91.84%**	6.9%	2.74%	0%
Illegal prostitution	2.04%	0%	1.37%	0%
Jewellery smuggling	0%	5.17%	0%	0.87%
Tax evasion	0%	1.72%	4.11%	2.61%
Theft/Burglaries	2.04%	1.72%	1.37%	1.74%

Second, the *volume of monetary assets* as targets of money laundering incidents was a shared property amongst all clusters. Table 10 reports the volume of criminal monetary assets

across clusters I-IV. To various degrees, clusters I-IV showed both high- and low amounts of money. Money laundering incidents in cluster IV saw a slightly higher volume of criminal assets than clusters I-III, with over two-thirds of the cases in cluster IV covering large amounts of criminal assets. In comparison, low volumes of money were more common characteristics in clusters I-III. Here, most money laundering incidents in cluster II covered only low amounts of criminal assets. Regardless, neither high nor low volumes of money were unique to money laundering incidents of only one cluster. Accordingly, a shared property of money laundering incidents across all clusters was that they concerned both low and high volumes of monetary assets.

Table 10

Volume of Monetary Assets per Cluster

Volume of Crime-Money	Cluster I (N=49)	Cluster II (N=58)	Cluster III (N=73)	Cluster IV (N=115)
High-Volume	34.69%	31.03%	43.84%	67.83%
Low-Volume	65.31%	68.87%	56.16%	32.17%

Third, the co-offenders with social ties, professionals, and organised crime groups were defining and shared properties of cluster I-IV. Table 11 reports the logistical component categories for the four-cluster solution. The participation of *family and friends* during a money laundering incident was a shared characteristic between clusters I-III. Over half of the money laundering incidents grouped in cluster II showed the involvement of family and friends. Less commonly observed were family and friends in clusters I and III, where approximately 29 percent and 36 percent saw the co-offenders with social ties. Similarly, the participation of *professionals* holding expertise that ultimately aids the crime was a shared characteristic amongst clusters. Approximately one-fifth of money laundering incidents in cluster I included professionals. Likewise, slightly over one-tenth of the incidents in cluster IV saw the

participation of professionals during money laundering. However, the results suggested the participation of *organised crime* as defining property. One-fifth of the money laundering incidents grouped in cluster IV were linked to organised crime groups. By way of comparison, money laundering incidents in clusters I and II showed zero involvement of organised crime groups. Moreover, in less than ten percent of the incidents in cluster III, the participation of organised crime could be observed.

Table 11

Logistical Components per Cluster

Logistical Components	Cluster I (N=49)	Cluster II (N=58)	Cluster III (N=73)	Cluster IV (N=115)
Family and Friends	**28.57%**	**51.72%**	**35.62%**	7.83
Organised Crime Group	0%	0%	9.59%	**20%**
Professionals	**18.37%**	5.17%	1.37%	**11.3%**

Fourth, *legitimate businesses associated with offenders* may be considered shared properties of clusters at best. Table 12 shows the legitimate business affiliated with offenders per cluster. None of the clusters of money laundering incidents showed ten percent or more of businesses affiliated with or owned by offenders. Cluster II saw the highest amount of money laundering incidents with the involvement of legitimate businesses linked to the offenders. Motorcycle shops affiliated with offenders could often be observed in eight percent of cases. However, no involvement of affiliated companies was observed in more than ten percent of the clustered money laundering incidents. Consequently, collaborating businesses were not considered a determining factor for classifying money laundering incidents.

Table 12

Associated Legitimate Businesses per Cluster

Associated Legitimate Businesses	Cluster I (N=49)	Cluster II (N=58)	Cluster III (N=73)	Cluster IV (N=115)
Currency Exchange Service	8.16%	0%	0%	4.35%
Holding	0%	1.72%	0%	0%
Industrial Unit	0%	0%	0%	0.87%
Logistics Companies	0%	0%	1.37%	2.61%
Lorry Sales	4.08%	0%	0%	0%
Money Service Business	0%	0%	0%	7.63%
Motorcycle Shops	0%	8.62%	0%	0%
Real Estate and Letting Agency	0%	1.72%	0%	0.87%
Scrap Metal and Haulage Yard	0%	0%	1.37%	0%
Shell Company	2.04%	0%	0%	0.87%
Solicitor Firm	4.08%	3.45%	0%	0.87%
Storage Unit	0%	0%	0%	0.87%
Trust	4.08%	0%	0%	0%

Fifth, the various *locations* of money laundering incidents were both defining and shared cluster properties. Table 13 reports the locations of money laundering per cluster. Most reported crime sites were neither defining nor shared cluster properties. Specifically, most money laundering locations were not associated with more than ten percent of clusters. However, the exceptions were money service and exchange businesses, residential buildings, and streets. Money service and exchange shops were typical a feature for multiple clusters. In less than one-fifth of the incidents grouped in clusters II and IV, money laundering occurred at money service and exchange shops, making it a shared cluster property. Additionally, residential buildings and streets were regarded as defining properties of clusters. *Residential buildings* were recurring crime sites for money laundering incidents in cluster III. Almost three-quarters of incidents in cluster III saw residential buildings as the money laundering location. In comparison, in less than ten percent of the cases in clusters I, II, and IV, residential buildings were places where money laundering occurred. Similarly, streets appeared to be the

money laundering location for incidents in cluster IV. Zero and 3.5 percent of incidents in clusters I-III involved streets as money laundering locations. However, in cluster IV, approximately two-fifths of the money laundering incidents occurred on roads. Both residential buildings and streets were considered defining properties for clusters III and IV, respectively.

Table 13

Location of Money Laundering per Cluster

Location	Cluster I (N=49)	Cluster II (N=58)	Cluster III (N=73)	Cluster IV (N=115)
Airport	0%	3.45%	0%	6.95%
Bank Branch	2.04%	1.72%	0%	2.61%
Betting Shop	0.87%	0%	0%	0%
Café	0.87%	0%	0%	0%
Car Dealership	0%	1.72%	0%	0%
Car Ferry	0%	0%	0%	1.74%
Car Park	0%	0%	1.37%	3.48%
Department Store	0%	1.72%	1.37%	0%
Hotel	0%	0%	1.37%	5.22%
Industrial Park	0%	0%	1.37%	0%
McDonald's	0%	0%	0%	0.87%
Money Service/ Exchange Service	4.08%	**18.97%**	0%	**12.17%**
Pawnshop	0%	1.72%	0%	0%
Residential Building	2.04%	0%	**73.97%**	5.22%
Scrap Metal Yard	0%	0%	1.37%	0%
Service Station	0%	0%	0%	0.87%
Solicitor Office	0%	1.72%	0%	0%
Sport Store	2.04%	0%	0%	0%
Storage Unit	0%	0%	0%	0.87%
Streets	0%	3.45%	1.37%	**40.87%**
Train Station	0%	0%	0%	0.87%

7.3.2.2 Money-Laundering Crime Events. Key components of money-laundering crime events included stages and their methods. First, money laundering stages were regarded as shared and defining cluster properties. Table 14 outlines the money laundering stages per cluster. The *change of nominal ownership* and the *integration* of criminal assets represented shared characteristics in this four-cluster solution. Almost all money laundering incidents in cluster I and approximately half of the cases grouped in clusters II and IV involved criminal monetary assets being moved from one person to the next. The finding is important as it

indicates that all money-laundering crime events likely comprise changes of the nominal ownership of the criminal asset. Furthermore, the integration of criminal property was a shared cluster property. Approximately one-fifth of money laundering incidents in cluster I and four-fifths of cases in cluster II entailed the integration of criminal assets into the economy. Together, changing the ownership and integrating criminal assets

By way of comparison, seven money laundering stages occurred to be cluster-defining properties. *Exportation* was conducted in approximately one-fifth of money laundering incidents in cluster I, far less common in the reminders. In addition, *layering* was part of almost one-quarter of incidents grouped in cluster I. Furthermore, *placement* was the primary mode of criminal conduct in cluster II, with less than one-fifth of the cases including this money laundering stage. Moreover, the *possession* of cash can be considered a defining property of cluster IV since it was part of around 15 percent of incidents in this cluster. Also, the *storage* of criminal assets was the defining property of cluster III. Almost all money laundering incidents in this cluster had this money laundering stage in common, whereas it was hardly present in clusters I, II, and IV. Additionally, the *transportation* of criminal assets made for almost half of the money laundering incidents in cluster IV. Lastly, almost half of the money laundering incidents in cluster I covered attempts to make criminal funds *untraceable*. Altogether, money laundering stages represented the defining properties of various clusters.

Table 14

Money Laundering Stages per Cluster

Money Laundering Stages	Cluster I (N=49)	Cluster II (N=58)	Cluster III (N=73)	Cluster IV (N=115)
Ownership Change	**97.96 %**	**51.72%**	**20.55%**	**52.17%**
Conversion	4.08%	1.72%	0%	0%
Exportation	**18.37%**	8.62%	0%	6.09%
Integration	**28.57%**	**86.21%**	0%	0%
Justification	6.12%	8.62%	1.37%	0.87%
Layering	**22.45%**	0%	0%	0%
Placement	0%	**15.52%**	0%	2.61%
Possession	0%	0%	0%	**14.78%**
Storage	4.08%	5.17%	**97.26%**	4.35%
Transportation	2.04%	1.72%	1.37%	**46.94%**
Untraceable	**46.94%**	1.72%	0%	3.48%

Second, *money laundering methods* can be regarded as shared and defining properties of crime events in the four-cluster solution. Table 15 reports observed the money laundering methods per cluster. Here, cash, cheques/bank drafts, and financial accounts were shared properties across clusters. *Cash* was the most prominent shared property of money laundering incidents across all clusters. Almost all money laundering incidents in clusters III and IV comprised cash throughout parts of the crime commission process. To a lesser degree, clusters I and II included cash usage in less than 60 percent of money laundering incidents. The results suggest that cash is the most prominent money laundering method for crime events across all clusters. Furthermore, *cheques and bank drafts* were shared properties of money laundering incidents in clusters I and II. Around a quarter of money laundering incidents in cluster I and less than one-fifth of cases in cluster II included the usage of cheques and bank drafts. Lastly, *financial accounts* were shared property of money laundering incidents in clusters I and II. Almost all money-laundering crime events in cluster I and a third of the incidents in cluster II entailed criminals using financial accounts. In comparison, money laundering methods were defining properties of clusters. The use of *debit and credit cards* was a defining characteristic of cluster I. Here, slightly over one-tenth of the money laundering incidents in cluster I included

criminals exploiting debit and credit cards. Furthermore, *currency exchange services* were mainly exploited during money laundering incidents in cluster II. Almost a quarter of money laundering incidents relied on currency exchanges for money laundering. Moreover, *holdalls, suitcases,* and *rucksacks* are defining properties of money laundering incidents in cluster IV. Almost one-third of the money laundering incidents in cluster IV comprised bags used to process criminal funds. The finding was unexpected since studies on money laundering are not that granular. Likewise, another defining property of cluster IV was the usage of *vehicles*. Around two-fifths of incidents in cluster IV entailed vehicles being exploited for money laundering. Finally, *wire transfers* were the defining property for money laundering incidents in cluster I. Half of the grouped incidents in cluster I included offenders wiring illegal funds. In total, money laundering methods were both shared and defining properties of the four-cluster solution.

Table 15

Money Laundering Methods per Cluster

Money Laundering Methods	Cluster I (N=49)	Cluster II (N=58)	Cluster III (N=73)	Cluster IV (N=115)
Airplane	0%	3.45%	0%	1.74%
Cab	0%	0%	0%	3.48%
Cash	**57.14%**	**59.60%**	**93.15%**	**96.52%**
Cash/Safety deposit box	0%	1.72%	8.22%	0%
Chauffeur Services	2.04%	0%	0%	0%
Cheques/Bank drafts	**26.53%**	**17.24%**	1.37%	0.87%
Counting Machine	0%	0%	2.74%	0%
Credit/Debit Card	**10.20%**	1.72%	0%	0%
Currency Exchange	8.16%	**22.41%**	0%	1.74%
Financial Accounts	**91.84%**	**34.48%**	5.48%	3.48%
Holdall/Suitcase/Rucksack	0%	1.72%	5.48%	**31.30%**
Legal Services	4.08%	3.45%	0%	0%
Phone	0%	5.17%	0%	9.57%
Safe	0%	0%	5.48%	2.61%
Vehicles	0%	1.72%	1.37%	**41.74%**
Vessels	0%	0%	0%	1.74%
Wire Transfer	**48.98%**	5.17%	0%	0%

7.3.3 Cluster Configurations

In the last step, the properties unique to individual clusters are summarised. In particular, the percentages of defining properties of money laundering incidents in the same cluster were compared. The higher their fraction, the higher their importance. In addition, the interaction of properties was examined for individual money laundering incidents, where contextual information was deemed valuable. Likewise, shared characteristics common to money laundering incidents of other clusters were mentioned if they allowed the features of one class of money laundering incidents to be clarified. The arrangements of cluster-shaping characteristics build the foundation for classifying money laundering incidents. The following pages outline the configuration of defining properties for the individual clusters.

7.3.3.1 Cluster I. The defining characteristics of cluster I comprised a set of components from the proximal circumstances and the money-laundering crime event. Table 16 summarises the defining properties of cluster I. The property most commonly shared by money laundering incidents in this cluster I was the predicate offence. Almost all (91.84%) money laundering incidents in this cluster were concerned with the proceeds of *fraudulent activities*. Typically, money laundering incidents of this kind would comprise removing defrauded funds from the financial system and making them *untraceable* (48.98%). To a lesser degree, money laundering stages comprised *layering* (22.45%) and *exportation* (18.37%) of monetary assets.

A rather unexpected finding concerned the money laundering methods in cluster I. *Wire transfers* (48.98%) and *debit and credit cards* (10.2%) were exclusively used during money laundering incidents in cluster I. However, money laundering stages and methods considered defining properties were not necessarily linked. For example, half of the incidents in cluster I utilise debit and credit cards, a method typically associated with ownership changes and integration. Nevertheless, changes in nominal ownership and the integration of criminal assets are standard money laundering stages of crime events across other clusters. Even though the

usage of debit and credit is unique to money laundering incidents in cluster I, they are used during stages that are common to cases of other clusters. Simply put, the money laundering incidents in cluster I entailed uncommon money laundering methods used during typical phases of the crime event. Altogether, the money laundering incidents in cluster I comprised a rich set of defining properties unique to this group of cases.

Table 16

Defining Properties of Cluster I

Money Laundering Components	Subcomponents	Defining Property	Proportion
Proximal Circumstance	Predicate Offence	Fraud	91.84%
Money-Laundering Crime Event	Stage	Exportation	18.37%
		Layering	22.45%
		Untraceable	46.94%
	Methods	Debit and Credit Cards	10.2%
		Wire Transfer	48.98%

7.3.3.2 Cluster II: Cluster II entailed comparatively fewer defining characteristics. Table 17 reports the defining properties of cluster II. The money laundering incidents in cluster II shared many properties with cases in other clusters. No single aspect of the proximal circumstances was distinctive to this class of money laundering incidents. Nonetheless, the money laundering incidents in cluster II included two defining properties related to the crime event. On the one hand, using *currency exchange services* for money laundering could be entirely attributed to incidents in cluster II. Approximately one-fifth (22.41%) of incidents in cluster II exploited currency exchanges as a money laundering method. On the other hand, the *placement* of crime money was the money laundering stage typically employed during

incidents in cluster II. Here, the money laundering stage could be observed in approximately 15 percent of the incidents in cluster II.

Another interesting observation concerning money laundering stages and methods unique to cluster II was made. The placement was achieved through methods other than currency exchanges. None of the incidents showing placement saw the use of currency exchanges and the other way around. Conversely, currency exchanges were employed during crime events of money laundering incidents, where ownership changes and integration could be observed, a shared characteristic amongst multiple clusters. Overall, cluster II included money laundering incidents primarily shaped through the exploitation of currency exchange services and the placement of criminal funds into the financial system.

Table 17

Defining Properties of Cluster II

Money Laundering Components	Subcomponents	Defining Property	Proportion
Money-Laundering Crime Event	Stages	Placement	15.52%
	Methods	Currency Exchange	22.41%

7.3.3.3 Cluster III. The defining features of money laundering incidents in cluster III included components of the proximal circumstances and money-laundering crime events. Table 18 outlines the defining characteristics of this cluster of money laundering incidents. On the one hand, money laundering incidents in cluster III were defined by the *storage* of crime money. Almost all (97.26%) cases in cluster III entailed storage as the primary money laundering stage. On the other hand, incidents of this kind were defined through the location where money laundering occurred. Approximately three-quarters (73.97%) of money laundering incidents in cluster III appeared at *residential buildings*. In addition, the shared

properties provided useful contextual information for the defining properties of Cluster III. Offenders exploited residential buildings for cash storage, which was part of almost all (93.15%) money laundering incidents in cluster III. In summary, money laundering incidents in cluster III appeared more connected, comprising cash storage in residential buildings.

Table 18

Defining Properties of Cluster III

Money Laundering Components	Subcomponents	Defining Property	Proportion
Proximal Circumstance	Location	Residential Buildings	73.97%
Money-Laundering Crime Event	Stages	Storage	97.26%

7.3.3.4 Cluster IV. The money laundering incidents in cluster IV entailed various defining properties. Table 19 reports those features from the proximal circumstances and crime events unique to the money laundering incidents in cluster IV. Here, the defining features of the proximal circumstances comprised the location and logistical components of the money laundering incidents. Most money laundering incidents in cluster IV took place on *roads*. Two-fifths (40.87%) of incidents in cluster IV included streets as money-laundering crime sites. Furthermore, the money laundering incidents in cluster IV showed recurring logistical components. *Organised crime groups* were repeatedly involved in money laundering incidents of cluster IV. One-fifth (20%) of cases in cluster IV showed the involvement of organised crime.

Defining properties from the crime event contained different stages and methods unique to the money laundering incidents in cluster IV. Four subcomponents related to the money laundering stage and methods were identified. First, offenders *transport* crime money. Half

(46.94%) of the money laundering incidents in cluster IV comprised the transportation of criminal assets. Second, offenders *possessed* crime money. In cluster IV, to a lesser degree, some (14.78%) money laundering incidents included offenders getting caught possessing criminal assets. Third, *vehicles* have repeatedly been used as a method during money laundering incidents in cluster IV. Fourth, *bags* were essential methods for the money laundering incidents in cluster IV. In almost one-third (31.3%) of the incidents, offenders utilised holdalls, suitcases, and rucksacks during crime events.

Shared characteristics common to money laundering incidents of multiple clusters provided useful contextual information. In particular, *cash* was a critical element. Almost all (96.52%) money laundering incidents in cluster IX involved cash. The frequency was the highest occurrence observed across clusters. Accordingly, cash was considered vital for money laundering incidents in cluster IV.

Table 19

Defining Properties of Cluster IV

Money Laundering Components	Subcomponents	Defining Property	Proportion
Proximal Circumstance	Location	Street	40.87%
	Logistical environment	Organised Crime Group	20%
Money-Laundering Crime Event	Stages	Transport	46.94%
		Possession	14.78%
	Methods	Holdall/Suitcase/Rucksack	31.3%
		Vehicles	41.74%

7.4 Discussion

The chapter's main aim has been to classify money laundering incidents in a meaningful manner to make them more accessible. To that end, hierarchical clustering of 295 money

laundering incidents was performed to identify groups in the original data from England and Wales. The four-cluster solution offers several important insights into how money laundering works. Overall, the clusters of incidents bear no resemblance to the standard three-stage model commonly used to describe the money laundering process. The pages below include a discussion of the main findings and the strengths and weaknesses of this hierarchical clustering of money laundering incidents.

7.4.1 Key Findings

Eight findings of the hierarchical clustering of money laundering incidents should be mentioned. First, money laundering incidents are *complex*. In the three-stage model, money laundering is a relatively simple activity. Cash of illegal origin is placed into a bank account, layered in the financial system, and then integrated into the economy. In stark contrast, this thesis captures the complexity of money laundering incidents on a conceptual- and empirical level. Conceptually, the complexity of money laundering is the consequence of the interplay of proximal circumstances and crime events. Empirically, the hierarchical clustering of data from England and Wales resulted in classes of money laundering incidents shaped by different properties. Overall, the analysis presents a more nuanced perspective on money laundering, where the complexity follows the interplay of properties from proximal circumstances and crime events and complements work that distinguish money laundering based on its complexity (Levi & Soudijn, 2020; S. Schneider, 2004).

Second, money laundering incidents hold numerous *shared properties*. The shared properties of money laundering incidents identified in this thesis for England and Wales data partially align with ideas expressed in research and practice. *Cash* was integral to money laundering incidents across cluster boundaries. Furthermore, *drug trafficking* was a recurring

feature, representing the predominant predicate offence in three out of four clusters. Both traits have been considered important in the field of money laundering (Europol, 2015; Irwin et al., 2012; Reuter & Truman, 2004; Riccardi & Levi, 2018; Soudijn, 2016; van Duyne, 2003; van Duyne & Levi, 2005). However, the cluster analyses also offered some important new insights into the shared properties of money laundering incidents. Deliberate *changes to the nominal ownership* of criminal assets appeared essential to money-laundering crime events across clusters. In the scientific literature, if acknowledged at all, ownership changes are typically presented as one of many ways of handling criminal property (Chelliah & Prasad, 2017; Irwin et al., 2012; Jancsics, 2017; Riccardi & Savona, 2013; Suendorf, 2001; Unger, 2007). The cluster analysis results indicate that ownership changes are essential to most money laundering incidents and not just one of many alternatives. In addition, the reliance on *family and friends* to provide support was much bigger than expected. Money laundering incidents in three of four clusters appeared to rely on social ties. The finding was unexpected as the scientific literature mainly focuses on professionals and organised crime (Benson, 2020; Bongard, 2001; Levi & Soudijn, 2020; Soudijn, 2016) and only occasionally highlights the importance of kinship (Malm & Bichler, 2013; Soudijn, 2010). Together, the ownership changes and reliance on family and friends appeared to be money laundering property, whose importance has been overlooked in the scientific discourse.

Third, clusters of money laundering incidents have heterogeneous *defining properties*. The academic literature has suggested the predicate offence and the volume of illegal proceeds as potential defining properties for clusters of money laundering incidents. In this analysis, the four-cluster solution included defining properties from all parts of the money laundering incident. Here, the clusters were shaped by various components from the proximal circumstances and crime events. Locations, logistical components, stages, and methods could shape money laundering incidents. By way of comparison, predicate offences were only

partially observed as the defining property of clusters. Fraud was a defining property of cluster one, while the remainder of predicate offences were not. Drug trafficking, on the other hand, was a shared property of three clusters. A possible interpretation is that drug traffickers use a more vast set of methods to process criminal proceeds, as it was suggested by Reuter and Truman (2004, p. 34). Furthermore, the volume of crime money did not affect the clustering of money laundering incidents. Instead, money laundering incidents across all clusters comprised high and low volumes of crime money. Ultimately, the properties that shape money laundering incidents are heterogeneous and varied from cluster to cluster.

Fourth, none of the clusters showed significant overlaps with the *three-stage model*. An important finding of this cluster analysis was that none of the identified cluster solutions resembled the understanding of money laundering as a three-stage process. On the contrary, placement, layering, and integration were only haphazardly observed in money laundering incidents of different clusters. For example, layering was only observed in crime events of money laundering incidents in cluster I, which at the same time did not include a single observation of placement. The findings contradict the prevalent stance in research and practice, where the three-stage model is regularly referenced (Barone et al., 2022; N. Gilmour, 2021; Levi, 2022; Raiter, 2021; Valvi, 2022). In this way, the four-cluster solution identified in data from England and Wales represents a new classification of money laundering incidents.

Fifth, *fraud-money laundering* is the first class of incidents identified in the data. Almost all money laundering incidents in cluster I were related to money from fraudulent activities. Importantly, money laundering occurred primarily within the financial system, with offenders transferring funds to different accounts and ultimately withdrawing cash. These findings align with critics of the three-stage model, who have highlighted that incidents involving the proceeds of fraud should be considered a separate money laundering category (Platt, 2015; van Duyne, 2003, 2013). In the three-stage model, offenders aim to insert and hide

funds in the financial system. In stark contrast, fraud-money laundering starts in the financial system where the embezzled funds are ultimately from bank accounts. The mechanism is the opposite of the three-stage model and is consequently regarded as a separate class of money laundering.

Mainly, three unique features of the interplay between proximal circumstances and crime events of the money laundering incidents in cluster I are to be highlighted. On the one hand, fraudulent activities preceded almost all subsequent money-laundering crime events. Consequently, offenders faced similar challenges at the beginning of the money laundering operation. On the other hand, the volume of illegal proceeds during money laundering was generally small. For the most part, the criminal funds barely exceeded £60,000, meaning that offenders had to process only small amounts. Finally, most money laundering incidents in clusters I occurred inside the banking system, with little to no location in the physical world. The reliance on the banking system manifested itself in cluster I through the heavy usage of products and services offered by the financial industry. Typically, these incidents required financial accounts, wire transfers, and debit cards to move embezzled funds within the financial system.

From a conceptual perspective, the observations can be explained through the proximal circumstances of money laundering, where situational factors define the boundaries for the motivated offender during the criminal event. Fraudulent activities as the main predicate offence category can be assumed to set the logistical requirements in the banking system. Offenders are consequently forced to launder the embezzled funds in the banking system, at least at the beginning of the crime, before they can process the money elsewhere. Van Duyne (2013) has highlighted similar constraints when discussing the fundamental differences between cash-generative and non-cash-generative crimes. Accordingly, the proximal

circumstances of money laundering provide a practical approach to explain the widely held view in academia that predicate offences influence criminal events.

Interestingly, the volume of illegal proceeds in cluster I should have been bigger since frauds are typically believed to be among the most profitable predicate offence categories (HM Treasury & Home Office, 2020). However, it is unclear if the observations were due to less profitable frauds or deliberately designed to avoid detection. The former would suggest unsophisticated fraudulent activities, and the latter could indicate canned money laundering, where the deception also contains elements of money laundering (van Duyne et al., 2018). Regardless, there is a positive side effect for the offenders from the comparatively lesser amounts of embezzled funds. Small amounts of criminal proceeds are less likely to trigger investigations because transaction monitoring systems track if wire transfers exceed certain thresholds (Chang et al., 2008). The volume of illegal proceeds could have added another layer of camouflage, thereby accidentally or deliberately aiding money laundering incidents.

Sixth, *currency-exchange money laundering* is a discrete class of handling criminal property. Unlike fraud-money laundering, whose defining property was the predicate offence, the incidents in cluster II were primarily shaped by using a particular money laundering method. The findings align with the existing academic literature that considers currency exchanges an important money laundering method (HM Treasury & Home Office, 2020; Irwin et al., 2012; Unger, 2007). Moreover, the findings hold potential implications for cryptocurrency technologies, where exchange services are integral to financial crime (Gandal et al., 2018; Moore et al., 2018; Trozze et al., 2022). However, the results highlight the benefits of a multidimensional view for money laundering research, which is mostly missing in the current scientific debate. Indeed, empirical research typically covers in-depth analyses of particular settings of the phenomenon, such as human-trafficking money laundering, investment choices of criminals, or the participation of lawyers during money laundering

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(Benson, 2020; Kruisbergen et al., 2015; Petrunov, 2011; Soudijn, 2012). Despite making significant contributions within their respective niche, these empirical studies have hardly any overlaps. Contrastingly, currency-exchange money laundering is a unique class of money laundering incidents, combining properties usually discussed in isolation.

Importantly, the class of money laundering incidents had no cluster-defining properties from the proximal circumstance. In other words, the money laundering incidents of this class had many situational factors with other classes in common. The lack of defining properties from the proximal circumstances raises questions about the mechanisms that ultimately cause the distinct setting of money laundering. Regardless, situational factors remain indeed associated with the crime event. More than half of the money laundering incidents in cluster II involved family and friends. Additionally, money laundering activities sometimes occur at the premises of money services and currency exchange service providers, setting it apart from fraud money laundering, which exclusively unfolds inside the banking system. Currency-exchange money laundering has a physical component because it occurs outside the banking system, further evidenced by the high cash usage. In addition, most incidents in this category involve proceeds from drug trafficking, which is a common characteristic across most clusters. Understanding the interplay of the above situational factors is significant for unravelling the mechanisms that cause currency-exchange money laundering.

Conceptually, the proximal circumstances help explain currency-exchange money laundering. Indeed, the lack of defining properties from the proximal circumstances means that no situational factor can be singled out to explain the occurrence solely based on the hierarchical clustering results. However, academic literature hints at potential explanations for the specific interaction of situational factors for this money laundering category. Money laundering research has long suggested that not all predicate offences influence crime events equally. For instance, Reuter and Truman (2004) and Irwin et al. (2012) found evidence that

drug traffickers employ more money laundering techniques than other criminals. In broader terms, the implication is that drug traffickers are less restricted when choosing their actions for money laundering. Under those circumstances, other situational factors could have a mediator effect. The most prominent situational property in cluster II were co-offenders with social ties, which could have resulted in offenders choosing currency exchanges over other methods. One potential explanation could be that co-offenders with social ties could act on behalf of the offender at currency exchange offices, shielding their own identity. Altogether, currency exchanges appear to be the preferred choice where specific situational factors overlap.

Seventh, the *storage* of criminal proceeds stands for a specific class of money laundering incidents. Money laundering incidents in cluster III were shaped by properties from the proximal circumstances and crime events, especially the storage of money at residential buildings. Notable, this class of money laundering featured heavy cash usage, a characteristic shared with other incident categories. Unexpectedly, the properties defining this group of money laundering incidents have barely been considered in the academic literature. From a conceptual perspective, the three-stage model does not consider storing criminal assets an essential aspect of money laundering. From an empirical perspective, storing criminal funds has been portrayed as a preliminary step to exporting cash (Petrunov, 2011, p. 179). In stark contrast, the findings of this hierarchal clustering suggest that the storage of criminal assets is far more common and stands for distinct classes of money laundering incidents.

There are unique connections among the features of money laundering incidents in cluster III. First and foremost, the money laundering incidents of this category indicate an association between cash storage and residential properties, with almost all incidents involving cash storage in residential buildings. Notably, residential buildings were used to hide cash, effectively turning the location of the crime into methods of storing criminal proceeds. Here, the buildings were owned by the criminal themselves, their associates, or family and friends.

In addition, in more than any other category, the money laundering incidents in this class concerned the proceeds of drug trafficking. Closely related, storage almost exclusively involved cash and barely occurred inside the financial system, making it a predominately physical endeavour.

Potential explanations for the emerging associations are the predicate crime and the volume of illegal proceeds. First, storing criminal proceeds can be considered a logistical task caused by drug trafficking, the most commonly observed predicate offence to money laundering incidents in cluster III. Drug trafficking, as previously discussed, is a cash-based economy which can create the need to store cash. However, how drug cash is stored, such as where and for how long, ultimately depends on situational factors, particularly access to a suitable storage facility through own property, co-offenders, or family and friends. Notwithstanding, it is challenging to establish a definitive rationale for determining the necessity of storage and the offenders' choice for and against residential buildings based on theoretical considerations only. Second, the impact of the amount of money on the storage of criminal proceeds remains unclear. While it is frequently mentioned in money laundering studies (Hancock & Laycock, 2013; Irwin et al., 2012; Levi & Soudijn, 2020), the actual volume of illegal funds did not significantly affect whether storage could be observed. Both small and large sums of cash were found to be stored in money laundering cases within cluster III. It can be inferred that storing unlawfully obtained funds might be a logistical necessity in most instances of money laundering, as the need to store cash may arise when the amount exceeds what offenders can spend on a day-to-day basis.

Eighth, cash *transportation* is the fourth class of money laundering incidents identified in this cluster analysis. The money laundering incidents in cluster IV were primarily shaped by the money laundering stages of transportation and, to a lesser extent, the possession of criminal funds using vehicles. Once again, cash was an integral part of this class of money laundering

incidents. An unexpected finding was that money laundering incidents in this category showed the involvement of organised crime groups. At face value, the results show many overlaps with those scientific publications, which already have studied cash smuggling from an international perspective (He, 2010; Riccardi & Levi, 2018; Soudijn, 2016; Soudijn & Reuter, 2016). Contrary to this scientific perspective, cash transportation, as observed in this thesis, lacked the international dimension since money laundering incidents took exclusively place inside a single country. Even though closely related to cash smuggling, cash transportation embodies a new class of money laundering incidents in single countries.

Various associations among properties from proximal circumstances and criminal events justify further discussion. Money laundering incidents concerning the transportation of criminal proceeds were mainly associated with drug trafficking. Even though drug trafficking was associated with money laundering incidents in other clusters, the predicate offence type was most prevalent during transportation. Likewise, almost all money laundering incidents of this category are carried out using cash. While observed across money laundering incidents of all clusters, cash was present in effectively all cases. In addition, money laundering incidents of this category tend to handle more criminal proceeds. To a larger extent, this money laundering category had the highest proportion of incidents handling criminal assets above £60,000. Finally, the transportation of criminal funds showed, though to a lesser extent, the participation of organised crime groups. The presence of organised crime are noteworthy, as organised crime groups were hardly a factor for other classes of money laundering incidents. All in all, the transportation of criminal assets showed a distinctive configuration of properties from proximal circumstances and criminal events.

Potential explanations exist for the observed configuration of money laundering incidents while transporting criminal assets. The identified associations can be explained from the perspective of the proximal circumstances of money laundering. The transportation of cash

involved mostly comparatively large amounts of cash profits from drug trafficking, setting the requirements for money laundering. It appears that the proceeds from drug trafficking had reached a certain quantity making it necessary for the cash to be moved. Even though the data only hints at the logistical requirements of cash transportation, the literature offers complementary insights in favour of this interpretation. Soudijn and Reuter (2016) investigated the costs of moving currency from the Netherlands to Colombia. They identified various costs for cash smuggling, such as currency exchange fees, courier fees, plane tickets, and transportation costs, highlighting the logistical needs for transporting cash. Against this backdrop, the involvement of organised crime groups indicates a certain level of logistical support for these cash transports. Their presence may also be explained through their participation in the underlying drug offences. Nevertheless, it is fair to assume that organised crime groups provided some logistical support for cash transportation.

7.4.2 Strengths and Limitations

This section outlines the strengths and limitations of the hierarchical cluster analysis. The *strengths* of this chapter are methodological and empirical. The *methodological contribution* of this chapter was applying cluster analysis methods to classify money laundering incidents in a meaningful and transparent manner. The new approach to exploring money laundering incidents is complementary to the work of Savona and Riccardi (2017), who have used principal component analysis to create money laundering risk indicators. The principal component analysis is a method to minimise dimensionality in large datasets by creating fewer variables while preserving the information of the original dataset (Jollife & Cadima, 2016, pp. 1–2). Complementary to this procedure, cluster analysis focuses on findings groups of similar objects or cases in data (Everitt et al., 2011, pp. 7–8). The common goal of both data analysis procedures is, therefore, to reduce data complexity. Consequently, cluster

analysis represents a complementary approach to data analysis procedures to simplify complex data on money laundering. The *empirical contribution* comprises a new classification of money laundering incidents based on data from England and Wales. The scientific foundation of the three-stage model with shortcomings in the theoretical foundation, empirical support, and research practice remains doubtful. By way of comparison, throughout this thesis, the properties of money laundering incidents have been defined and grouped transparently based on the data from England and Wales. The new classification of money laundering incidents stands for a transparent approach to simplifying how money laundering can occur.

The *limitations* of this chapter are twofold. *First*, the classification in its current form represents the money laundering incidents outlined in court transcripts from England and Wales exclusively. The four classes of money laundering incidents were based on information extracted from transcripts of the Court of Appeal and Administrative Courts from England and Wales. However, the sample may not be representative. Moreover, cluster analysis is not a tool of inferential statistics (Everitt et al., 2011, p. 261). In summary, neither data nor data analysis method provided the basis for generalisations beyond the borders of the analysed sample. Follow-up studies are needed to confirm if similar clusters of money laundering incidents can be found under different circumstances. Even though this stands for a new line of research, this chapter's findings should be interpreted exclusively in the context of England and Wales.

Second, setting up this cluster analysis procedure of money laundering incidents comprised many methodological decisions. There were no standards for conducting cluster analyses in the field of money laundering. All aspects of this cluster analysis required decisions concerning the data transformation, clustering procedures, distance measures, number of clusters, and cluster characteristics. Without any guidance, the cluster analysis procedure of this chapter was based on the methodological literature, which was then applied to the context of money laundering. For example, the Jaccard coefficient was specifically selected as a

distance measurement between cases based on how it treated the absence of properties, which was considered best suited for money laundering incidents. The decisions for and against distinct procedural paths can only be understood against the backdrop of given data and research purposes (Aldenderfer & Blashfield, 1984; Everitt et al., 2011; Kaufman & Rousseeuw, 2005). The chapter covered a detailed protocol of every decision made during the design phase to minimise ambiguities, including a brief rationale for why the decision was made. The detailed design protocol ensures the replicability of this study.

7.5 Conclusion

This chapter has aimed to classify money laundering incidents in a meaningful manner. To that end, hierarchical clustering of 295 money laundering incidents was performed to identify groups of similar cases in data for England and Wales. The findings suggest a new classification of money laundering incidents, representing a departure from the standard depiction of money laundering as a three-stage process. Each cluster of money laundering incidents had a unique set of defining and shared properties from the proximal circumstances and crime events. The mix of distinct and similar properties of money laundering incidents is a testament to the complexity of money laundering. Future research must find ways to reconcile similarities and differences. In this respect, this thesis is only a first step towards a more nuanced understanding of how money laundering works.

Chapter 8:

Thesis Conclusion

This chapter contains the concluding remarks for this thesis. Regardless of significant weaknesses in the theoretical foundation, empirical support, and research practice, the three-stage model has remained the predominant understanding of money laundering within research and practice. In stark contrast, the thesis has offered an alternative view to the flawed conceptualisation of money laundering as a three-stage process. In particular, crime science theory was selected as the overarching framework of this thesis, extending the view beyond the properties of criminal conduct. The thesis' primary objective has been to explore how money laundering works while considering crime events and their immediate environment. With this primary objective, the essential aspects of money-laundering crime events, the proximal circumstances, and their interplay required empirical examination. To that end, an original dataset on money laundering was created using a quantitative approach to content analysis for full judgment transcripts of the Court of Appeal and Administrative Court of England and Wales. Here, the money laundering characteristics outlined in court transcripts were identified, conceptualised, and refined in an iterative process between data and theory. By and large, the findings of this thesis offer an alternative viewpoint to the prevailing idea about how money laundering works. The pages below detail the main findings and the implications and recommendations for future research.

8.1 Summary

Each chapter aided the primary objective of this thesis of exploring how money laundering works in different ways. Chapter 2 included the first scoping review of empirical research, including the three-stage model. The knowledge synthesis method allowed for determining the

scope, key concepts, evidence, and research practices of studies, where money laundering was considered a three-stage process. The findings of this scoping review support those who have criticised the three-stage model for its weak scientific foundation. First and foremost, only a small number of empirical studies could be identified in this literature review. The small number of empirical studies fuels the criticism that the three-stage model is not supported by evidence. Equally important, there was no consensus about the meaning of critical concepts of placement, layering, and integration. Different definitions were reported for the fundamental concepts of the three-stage model throughout the reviewed studies, suggesting a lack of consensus. Finally, the reviewed empirical studies represented exclusively descriptive research based on mostly unrepresentative samples. No explanation was provided why offenders launder money in three stages. In summary, the scoping review in Chapter 2 provided unique insights into the state-of-the-art research about how money laundering works. Additionally, the chapter created the knowledge base for the selection of the research method of this thesis.

Chapter 3 outlined the method of this thesis, especially the primary data source, data collection technique, and data analysis procedures that enable the empirical examination of money laundering. Based on the findings from the scoping review, full judgment transcripts from the Court of Appeal and the Administrative Court of England and Wales were chosen as the sole data source of this thesis. A new quantitative approach to content analysis was designed, consisting of steps to unitise, sample, and code relevant textual information from court records. Moreover, analytical strategies and data analysis procedures were chosen to enable the discovery of properties and classes of money laundering incidents in court records. The chapter contributed the method applied in the subsequent chapters to explore how money laundering works.

Chapter 4 comprised the empirical study of the money-laundering crime event. The main objective of chapter 4 was to identify the central money laundering stages and methods

of the crime event. The starting point was the creation of a new conceptual framework to enable investigations into money laundering beyond the confines of the three-stage model. The kind hierarchy of money laundering was created as a set of nested concepts, where the crime event consists of stages and their methods. Once conceptualised, code and word frequencies were calculated for 1,364 quasi-sentences drawn from 180 full judgment transcripts from the Court of Appeal and Administrative Court of England and Wales (1997-2017). Eleven money laundering stages and numerous related methods were identified. Money laundering stages ranged from mere possession to ownership changes of the criminal proceeds, presenting a more nuanced view of the offenders' strategies for handling ill-gotten gains. Money laundering methods used during individual stages comprised numerous financial and non-financial products and services. Altogether, the code and word frequency analysis suggested that the standard three-stage mode ignores many aspects of the money-laundering crime event.

Chapter 5 entailed the empirical analysis of the environment in which money laundering occurs. This chapter's main goal was to identify the properties that make the immediate environment of money laundering. The conceptual framework was based on Ekblom's (1994) paradigm of proximal circumstances, which was modified to better account for money laundering. The revised conceptual framework included components of the predicate offence, potential offenders, and situation. Similar to the previous analysis, word frequencies were computed for 567 quasi-sentences from court records to find properties of the criminogenic environment. The word frequency analysis returned a rich set of information for the predicate offences and situations but only a few offender details. Court transcripts contained mentions of predicate offences such as drug-related crimes, fraud, theft, and jewellery smuggling. Moreover, the documents comprised details about the situation of money laundering. Here, court records covered references to crime sites such as streets and commercial and residential buildings. In addition, crime-facilitating factors like organised

crime groups and co-offenders with social ties. In contrast, despite references to the offenders' sex, documents contain little extra information about criminal actors. Taken as a whole, the paradigm of proximal circumstances helped to conceptualise the many factors of the immediate environment with the potential to affect money laundering.

Chapter 6 marked a shift in the perspective of this thesis. The previous chapters aimed to conceptualise and analyse the properties of money laundering and its immediate environment. In stark contrast, the main goal of chapter 6 was to assess the prevalence of characteristics from proximal circumstances and crime events during money laundering incidents. The task required further expanding the conceptual framework and transforming the utilised data. Conceptually, the suspected mechanisms between the proximal circumstances and money-laundering crime events were further clarified. Contrary to the three-stage model, money laundering was not viewed as a fixed sequence of stages but rather understood as a dynamic process with numerous possible configurations. Methodologically, data transformation was needed. The unstructured nature of court transcripts required quasi-sentences to be manually paired into cases representing money laundering incidents. Moreover, a refined code set was created that allowed for a more detailed analysis. Sample 2 covered 84 categorical and continuous variables for 305 money laundering incidents. Descriptive statistics were produced to assess the prevalence of characteristics of the proximal circumstances and crime events. The results offered a fresh perspective on the prevalence of characteristics across money laundering incidents. Predicate offences of most money laundering incidents were either drug trafficking or fraud. Furthermore, almost all money laundering incidents were concerned with monetary assets. Additionally, front companies, professionals, and organised crime groups only infrequently participated in money laundering. Also, money laundering mainly occurred in commercial and residential buildings and streets. The money-laundering crime event comprised, on average, less than two stages. Similarly, the most common money

laundering stage described in court transcripts was changing the nominal owner of criminal assets. The number and type of stages found in court documents showed little overlap with the concept of money laundering as a three-stage process. Money launderers exploited 18 financial or non-financial instruments, where the latter category remains underexplored. By and large, shifting the perspective to money laundering incidents allowed for assessing the prevalence of properties of the proximal circumstances and crime events.

Chapter 7 introduced a classification of money laundering incidents. The main goal of this chapter was to classify money laundering incidents in a meaningful manner to make them more accessible. An agglomerative hierarchical clustering was conducted for 295 money laundering incidents from sample 2 connected to criminal monetary assets. Clustering is a data analysis method to identify groups or classes of cases in data based on similarities. The cluster analysis of quasi-sentences from court transcripts suggested a new classification of money laundering incidents, representing a departure from the standard depiction of money laundering as a three-stage process. Four classes of money laundering incidents were identified, each with a unique mix of properties from the proximal circumstances and crime events. The defining characteristics of the four classes of money laundering incidents were fraud, currency exchange services, storage, and transportation. Overall, the classification of money laundering incidents emerging from the English and Welsh data offered a fresh perspective on how money laundering works.

8.2 Implications and Recommendations for Future Research

This thesis has four implications for research and practice. First, many *money laundering stages* identified in this analysis are neither captured in the three-stage model nor fully addressed in the scientific debate. In particular, eight money laundering stages were identified, which are

not captured by the sequence of placement, layering, and integration. Notably, the field of money laundering has barely addressed the *changes in nominal ownership* of criminal assets, which stood for the most prevalent money laundering practice in this thesis. If acknowledged, money laundering research addresses the importance of ownership changes adjacent to the three-stage model or in the context of specific money laundering methods (Chelliah & Prasad, 2017; Irwin et al., 2012; Jancsics, 2017; Riccardi & Savona, 2013; Suendorf, 2001; Unger, 2007). Similarly, the *storage* and *transportation* of criminal assets represented critical components of the money-laundering crime events analysed in this thesis. In stark contrast, research and practice have viewed these criminal behaviours as merely preparatory steps for moving cash abroad (Cassella, 2018; Financial Action Task Force, 2015; Petrunov, 2011; Soudijn, 2016; Soudijn & Reuter, 2016). Ultimately, the three-stage model leaves out critical parts of the crime event, representing a severe knowledge gap about how money laundering works.

The thesis has far-reaching implications for research and practice. Incomplete assumptions about the money-laundering crime event are harmful to combating money laundering. In particular, researchers with a strong policy focus are at risk of studying and promoting money-laundering control measures with an inbuilt blind spot, overlooking essential parts of criminal behaviour. Similarly, practitioners may jeopardise the detection, investigation, and prevention of money laundering by relying on incomplete assumptions that make them miss important aspects of the crime event. These concerns are not new and have already been voiced by several authors (Cassella, 2018; P. M. Gilmour, 2022; Kleemans, 2015; Platt, 2015). Against this background, this thesis has offered a novel conceptual framework that avoids the narrow perspective on money-laundering crime events using crime science theory. The framework was used to analyse information on money laundering included in court transcripts from England and Wales. However, crime events may comprise different money laundering

stages depending on the utilised data. Additional research on money-laundering crime events is needed to further the understanding about the phenomenon. Here, research may explore the money laundering stages identified in this thesis based on different empirical evidence.

Second, the *money laundering methods* need further examination. In this thesis, the products and services exploited by offenders at a given stage were considered money laundering methods. Here, offenders were found misusing various financial and non-financial instruments for money laundering. The former comprises products and services offered inside the financial system, such as broker services, cash, safety deposit boxes, financial accounts, and wire transfers. The latter includes everyday products and services outside the financial system, like cabs, chauffeur services, counting machines, holdalls, legal services, safes, and vehicles. Notably, research and practice have traditionally focused on financial instruments (Bongard, 2001; European Commission, 2017, 2019; Levi & Reuter, 2006; Reuter & Truman, 2004; Riccardi & Levi, 2018; Steinko, 2012; Teichmann, 2017). Except for legal services (Benson, 2020; Lankhorst & Nelen, 2005; Levi, 2020; Valvi, 2022), the non-financial instruments observed in this thesis are less commonly discussed in the context of money laundering. There is a need for additional research on offenders exploiting everyday products and services for money laundering.

Non-financial instruments have security implications. Everyday products and services can become targets, tools, or settings for crimes. However, not all products are at equal risk of becoming involved in criminal activities (Ekblom, 2008, pp. 202–203). The role of non-financial instruments during money laundering is not evident since they do not aim to facilitate investments and commercial activity. Further work is therefore required to establish which everyday products and services are most vulnerable to money laundering. Equally important to note is that understanding the misappropriation of ordinary products and services for money laundering can aid crime prevention. For example, Lulham et al. (2012) described the

development of counter-terrorism bins as a security feature at selected train stations in Australia. Analogously, the misuse of non-financial instruments during money laundering can have consequences for product designers and regulators. The risk factors and security implications of exploiting everyday products and services for money laundering require additional research.

Third, further work is needed to establish *the proximal circumstances* of money laundering. The proximal circumstances of money laundering were introduced as the conceptual framework of this thesis to identify criminogenic factors from the immediate environment. Using Ekblom's (1994) work as a starting point, the immediate environment of money laundering was conceptualised as proximal circumstances, comprising the predicate offence, offenders, and situation. Although the utilised court transcripts did not include much offender-related information, they held considerable details about predicate crimes and situations. On the one hand, *predicate crimes* can sometimes be intertwined with money laundering. Analytically, the lines between the initial offence generating the criminal proceeds and the subsequent money-laundering crime event are not always clear-cut. For example, money laundering is sometimes described as an inbuilt feature of fraud, which heavily relies on forged documents to defraud and justify criminal funds at once (Levi & Reuter, 2006; van Duyne, 2003). Similarly, the thesis' results comprised jewellery smuggling as a predicate offence to money laundering. The result was somewhat unexpected since it is usually referred to as a money laundering method in the available literature (Financial Action Task Force & Egmont Group of Financial Intelligence Units, 2013; Teichmann, 2017; Teichmann & Falker, 2020). There is much room for further progress in determining characteristics of predicate offences and the suspected mechanisms ultimately affecting how money is laundered.

On the other hand, the *situation* in which money laundering occurs holds important implications for research and practice. Most of the information about the proximal

circumstances in court transcripts outlined criminogenic factors of the situation, including the location, logistical factors, and targets. Research and practice have distinguished *money laundering locations* primarily at the municipal or country level (Financial Action Task Force, 2022b; Savona & Riccardi, 2017; Vaithilingam & Nair, 2007; Walker, 1999). Against this backdrop, the thesis offers a new perspective complementary to the current view about where money laundering occurs. Multiple money laundering crime sites were identified and represented physical components of the city infrastructure, such as residential- and commercial buildings and streets. Future research should consider those characteristics of the urban infrastructure that are more likely to become crime sites for assessing the risk of money laundering.

Additionally, social ties are a critical *logistical factor* for money laundering. In this thesis, a recurring logistical factor of money laundering was co-offenders with social ties. By way of comparison, the involvement of front companies, organised crime groups, and skilled professionals were only infrequently observed as the criminogenic factors of money laundering, indicating a less sophisticated manifestation of the crime. These observations go against the common perception in research in practice, where money laundering is a complex crime requiring high professionalism and organisation (Benson, 2020; Financial Action Task Force, 2018b; Levi, 2022; Soudijn, 2012, 2014). The various degrees of professionalism and organisation justify further investigations since they could impact the countermeasures needed to tackle money laundering, as suggested by Levi and Soudijn (2020, p. 621). More research is needed to examine the logistical factors of money laundering, the underlying mechanisms, and the implications for adequate control.

Finally, money launderers target both *monetary and non-monetary criminal assets*. In this thesis, most of the proceeds of crime targeted during money laundering were monetary assets. Only in a few instances were non-monetary assets involved. The observations of non-

monetary assets are noteworthy since money laundering is usually examined with monetary assets in mind. Van Duyne et al. (2018, p. 120) emphasised that non-monetary criminal assets have received little attention in the scientific literature. From a legal perspective, all proceeds of crime can be laundered. The United Kingdom's legal framework covers the benefits of all criminal activities (Proceeds of Crime Act, 2002, Section 340). Non-monetary assets are consequently an important issue for future research worth investigating. Exploring the scope, asset types, and laundering practices associated with non-monetary gains can help enhance the understanding of money laundering and its prevention.

Fourth, the new *classification* of money laundering incidents is a radical departure from the standard conception of how money laundering works. In this thesis, money laundering incidents were classified based on properties from the proximal circumstances and crime events. In a series of studies, the thesis has produced the conceptualisation and empirical evidence to classify money laundering incidents. The classification system of this thesis goes beyond the standard three-stage model, where the crime event is divided into a rigid sequence of placement, layering, and integration. Considering both characteristics from the proximal circumstances and crime events offers an alternative viewpoint with implications for research and practice. From the *researcher's perspective*, the new classification system offers a novel approach to money laundering research conceptually, methodologically, and empirically. *Conceptually*, the classification of money laundering incidents is flexible. There is no single classification that universally applies to all circumstances. Instead, the categories reflect the specific interplay of properties from the crime event and its immediate environment in a given category of money laundering incidents. *Methodologically*, the quantitative approach to data gathering and analysis is new and represents a new line of research that can be replicated for any textual data sources on money laundering. *Empirically*, the classes of money laundering identified in the data from England and Wales comprised incidents that showed little

resemblance to the three-stage model. Additional research should focus on determining if the identified classes of money laundering incidents represent universal categories. Furthermore, the suspected mechanisms between properties of the proximal circumstances and crime events warrant further investigation.

From the *practitioner's viewpoint*, the new classification of money laundering incidents based on data from England and Wales holds important implications for the local anti-money laundering framework. The discoveries of this dissertation are complementary to the United Kingdom's national risk assessment of money laundering and terrorist financing (2020). Several overlaps exist for common themes in the latest national risk assessment and the present thesis, offering a fresh perspective on money laundering threats in the United Kingdom. There are at least four implications for practitioners in the field of anti-money laundering. First, the national risk assessment acknowledges the threat of money laundering linked to fraud as the largest known source of criminal proceeds (HM Treasury & Home Office, 2020). The underlying understanding is that major fraud follows the utilisation of high end money laundering methods to facilitate the movement of substantial sums within the financial system (National Crime Agency, 2014). Along similar lines, fraud-related money laundering was identified in this thesis as a distinct class of incidents where illicit funds are moved in and removed from the financial system. However, unlike the latest risk assessment of money laundering and terrorist financing, the classification of money laundering incidents summarised fraud-money laundering in the United Kingdom as an offence to process relatively small amounts of illicit funds relying on day-to-day products and services of the financial system. The focus on high end money laundering following major fraud cases presents a distorted perspective and is a missed opportunity for law enforcement in the United Kingdom. To acknowledge the importance of fraud-money laundering can deter individuals and

organisations from engaging in criminal activity, and gathered intelligence can be utilised to identify trends.

Second, the national risk assessment highlights the importance of the United Kingdom's financial sector, considering it at high risk of becoming a vehicle for money laundering. For the longest time, retail banking, including its account options and payment services, has represented a valuable method for money laundering. However, retail banking has recently become increasingly vulnerable to money laundering due to changing customers. Today, customers are onboarded faster with reduced in-person interaction, and Customer Due Diligence tasks are outsourced or replaced by technical solutions (HM Treasury & Home Office, 2020). The emerging trends in retail banking seem especially problematic in the light of this thesis. Unsurprisingly, money launderers heavily relied on the financial sector when laundering criminal funds. However, money launderers were far less dependent on the services of experts such as accountants or lawyers. Instead, co-offenders with social ties like family members or friends often assisted money launderers by giving access to their bank accounts and funnelling money through. Recent trends in customer relations pose an increasing risk for retail banking to unwittingly onboard money launderers and their extended social circles. Retail banks' evolving innovations in customer relationships must be met with a rigorous customer due diligence protocol detecting money launderers and their co-offenders with social ties facilitating illegal activities.

Third, the national risk assessment of money laundering and terrorist financing considers cash to be at high risk of money laundering despite declining usage in the United Kingdom. The risk assessment sees cash smuggling, cash deposits, and cash-intensive businesses as the use cases for money laundering (HM Treasury & Home Office, 2020). Correspondingly, the thesis considered cash a crucial building block for money laundering. Indeed, cash deposits to place illegally generated money in the financial system and cash

smuggling of criminal proceeds across borders were haphazardly observed. However, many risks identified in the thesis are not captured by the national risk assessment of money laundering and terrorist financing. Importantly, cash enables essential logistical processes for money launderers, particularly storing and transporting cash domestically, which need to be acknowledged in the national risk assessment. The practical implications for law enforcement are plentiful but require a proactive approach to money laundering investigations. Seizing illegal cash stored at residential buildings can disrupt criminal operations but require knowledge about the storage location. Likewise, intercepting cash transports can have a deteriorating effect on offenders and their networks. Yet knowledge about transportation routes needs to be established. Identifying the storage location and transportation routes of cash could be achieved using analytical techniques like crime mapping and social network analysis (Cockbain & Laycock, 2010). Equally important, collaboration and information sharing amongst domestic law enforcement organisations will be key for effectively disrupting the storage and transportation of cash inside the United Kingdom.

Fourth, the national risk assessment of money laundering and terrorist financing in the United Kingdom sees money service businesses, including currency exchange services, at a high risk of exploitation for money laundering. The vulnerabilities are mainly due to three factors: On the one hand, money service businesses allow to send and exchange currency globally, accept cash, and have low service fees. On the other hand, money service businesses have only informal, short-term customer relationships, posing challenges in identifying suspicious behaviour. Lastly, small and medium-sized money service businesses keep compliance costs at a minimum since these require investments in personnel and technology. As a result, the sector's ability and willingness to meet regulatory obligations could be better (HM Treasury & Home Office, 2020). Likewise, the exploitation of money service businesses, particularly currency exchanges, reflects a distinct class of money laundering incidents in this

thesis. In light of their attractive business model, informal customer relations, and compliance standard in the sector, it is everything but surprising that offenders would exploit currency exchange services for money laundering. Policymakers in the United Kingdom must radically change the industry's stance towards compliance to prevent money laundering through money service businesses, specifically currency exchanges. Since regulations are mainly viewed as a cost that further reduces profit margins, the sector might be more willing to meet regulatory obligations if compliance costs are reduced, and non-compliance is considered costly. The former could be archived through staff training, access to technical solutions, or continuous information sharing. The latter can be achieved with regular audits and the power to fine non-compliant businesses. To stop money laundering through money service businesses and currency exchanges, regulators in the United Kingdom must significantly change poor compliance standards in the sector. In summary, the new classification system of money laundering incidents presented in this thesis complements the United Kingdom's national risk assessment of money laundering and terrorist financing, potentially enhancing the effectiveness of domestic anti-money laundering efforts.

References

Acheson, A. (2010). Sample Size. In *Encyclopedia of Research Design* (pp. 1300–1301). SAGE Publications, Inc. https://doi.org/10.4135/9781412961288.n396

Acheson, A. (2012). Sample Size. In N. J. Salkind (Ed.), *Encyclopedia of Research Design* (pp. 1300–1301). SAGE Publications, Inc. https://doi.org/10.5040/9781501365287.2349

Aldenderfer, M. S., & Blashfield, R. K. (1984). *Cluster Analysis*. SAGE Publications, Inc. https://doi.org/10.4135/9781412983648

Alldridge, P. (2003). *Money Laundering Law. Forfeiture, Confiscation, Civil Recovery, Criminal Laundering and Taxation of the Proceeds of Crime*. Hart Publishing.

Alonso, S., Volkens, A., & Gómez, B. (2012). *Content-analyzing Political Texts. A Quantitative Approach*. CIS.

Altman, D. G., & Royston, P. (2006). The cost of dichotomising continuous variables. *British Medical Journal*, *332*(May), 2006.

Amorim, R. C. de. (2015). Feature Relevance in Ward's Hierarchical Clustering Using the Lp Norm. *Journal of Classification*, *32*, 46–62. https://doi.org/10.1007/s00357

Antonopoulos, G. A., & Hall, A. (2016). The financial management of the illicit tobacco trade in the United Kingdom. *British Journal of Criminology*, *56*(4), 709–728. https://doi.org/10.1093/bjc/azv062

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology: Theory and Practice*, *8*(1), 19–32. https://doi.org/10.1080/1364557032000119616

Armitage, R. (2017). Crime prevention through environmental design. In R. Wortley & M. Townsley (Eds.), *Environmental Criminology and Crime Analysis* (2nd ed., pp. 259–285).

Taylor & Francis Group. https://doi.org/10.4324/9781315709826

Ayres, L., Kavanaugh, K., & Knafl, K. A. (2003). Within-case and across-case approaches to qualitative data analysis. *Qualitative Health Research*, *13*(6), 871–883. https://doi.org/10.1177/1049732303013006008

Bailey, K. D. (1989). Constructing typologies through cluster analysis. *Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique*, *25*, 17–28.

Bailey, K. D. (1994). *Typologies and Taxonomies: An Introduction to Classification Techniques*. SAGE Publications, Inc. https://doi.org/10.14359/51664257

Bank of England. (2022). *Exchange rate (effective) - Netherlands guilder data series*. https://www.bankofengland.co.uk/boeapps/database/FromShowColumns.asp?Travel=NIxAZxI1x&FromCategoryList=Yes&NewMeaningId=RBETHZ&CategId=6&HighlightCatValueDisplay=Exchange rate (effective) - Netherlands guilder

Barone, R., Masciandaro, D., & Schneider, F. (2022). Corruption and money laundering: You scratch my back, i'll scratch yours. *Metroeconomica*, *73*(1), 318–342. https://doi.org/10.1111/meca.12365

Bell, R. E. (2002). Abolishing the Concept of "Predicate Offence." *Journal of Money Laundering Control*, *6*(2), 137–140.

Benson, K. (2020). *Lawyers and the Proceeds of Crime: The Facilitation of Money Laundering and Its Control*. Routledge.

Berelson, B. (1971). *Content analysis in communication research* (Reprint). Hafner.

Bongard, K. (2001). *Wirtschaftsfaktor Geldwäsche*. Deutscher Universitätsverlag.

Boslaugh, S. E. (2010). Secondary Data Source. In N. J. Salkind (Ed.), *Encyclopedia of*

Research Design (Vol. 3, pp. 1095–1097). SAGE Publications, Inc.

Brantingham, P. J., & Brantingham, P. L. (1991). Introduction: the dimensions of crime. In P. J. Brantingham & P. L. Brantingham (Eds.), *Environmental Criminology* (pp. 1–26). Waveland Press, Inc.

Brantingham, P. J., Brantingham, P. L., & Andresen, M. A. (2017). The geometry of crime and crime pattern theory. In R. Wortley & M. Townsley (Eds.), *Environmental Criminology and Crime Analysis* (2nd ed., pp. 98–115). Taylor & Francis Group.

Brantingham, P. L., & Brantingham, P. J. (1993). Nodes, paths and edges: Considerations on the complexity of crime and the physical environment. *Journal of Environmental Psychology*, *13*(1), 3–28.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bright, D., Brewer, R., & Morselli, C. (2022). Reprint of: Using social network analysis to study crime: Navigating the challenges of criminal justice records. *Social Networks*, *69*(January), 235–250. https://doi.org/10.1016/j.socnet.2022.01.008

Briscoe, S., Bethel, A., & Rogers, M. (2019). Conduct and reporting of citation searching in Cochrane systematic reviews: A cross-sectional study. *Research Synthesis Methods*, *April*, 1–12. https://doi.org/10.1002/jrsm.1355

Brown Breslin, A. M. (2020). *Descriptive Statistics* (P. Atkinson, S. Delamont, A. Cernat, J. W. Sakshaug, & R. A.Williams (eds.)). SAGE Research Methods Foundations; SAGE Publications Ltd. https://doi.org/10.1007/978-1-59745-530-5_3

Bruinsma, G. J. N., & Johnson, S. D. (2018). Environmental criminology: Scope, history, and state of the art. In *The Oxford Handbook of Environmental Criminology* (pp. 1–31).

Oxford University Press. https://doi.org/10.1093/oxfordhb/9780190279707.013.38

Campbell, J. L., Quincy, C., Osserman, J., & Pedersen, O. K. (2013). Coding In-depth Semistructured Interviews. *Sociological Methods & Research*, *42*(3), 294–320. https://doi.org/10.1177/0049124113500475

Cassella, S. D. (2018). Toward a new model of money laundering: Is the "placement, layering, integration" model obsolete? *Journal of Money Laundering Control*, *21*(4), 494–497. https://doi.org/10.1108/JMLC-09-2017-0045

Chang, R., Lee, A., Ghoniem, M., Kosara, R., Ribarsky, W., Yang, J., Suma, E., Ziemkiewicz, C., Kern, D., & Sudjianto, A. (2008). Scalable and interactive visual analysis of financial wire transactions for fraud detection. *Information Visualization*, *7*(1), 63–76. https://doi.org/10.1057/palgrave.ivs.9500172

Chelliah, J., & Prasad, A. (2017). South Pacific transnational money laundering typologies. *Journal of Money Laundering Control*, *20*(4), 345–353. https://doi.org/10.1108/JMLC-11-2016-0045

Chen, A., & Zhu, W. (2001). Revisiting the assumptions for inferential statistical analyses: A conceptual guide. *Quest*, *53*(4), 418–439. https://doi.org/10.1080/00336297.2001.10491756

Choy, O., Raine, A., Venables, P. H., & Farrington, D. P. (2017). Explaining the gender gap in crime: The role of heart rate. *Criminology*, *55*(2), 465–487. https://doi.org/10.1111/1745-9125.12138

Clarke, R. V. (2004). Technology, criminology and crime science. *European Journal on Criminal Policy and Research*, *10*(1), 55–63. https://doi.org/10.1023/b:crim.0000037557.42894.f7

Clarke, R. V. (2017). Situational crime prevention. In R. Wortley & M. Townsley (Eds.), *Environmental Criminology and Crime Analysis* (2nd ed., pp. 286–303). Taylor & Francis Group.

Clarke, R. V., & Cornish, D. B. (1985). Modeling offenders' decisions: A framework for research and policy. *Crime and Justice*, *6*, 147–185. https://doi.org/10.4324/9781315095301-8

Clarke, R. V. (1980). "Situational" Crime Prevention: Theory and Practice. *British Journal of Criminology*, *20*(2), 136–147. https://doi.org/10.1093/oxfordjournals.bjc.a047153

Clatworthy, J., Buick, D., Hankins, M., Weinman, J., & Horne, R. (2005). The use and reporting of cluster analysis in health psychology: A review. *British Journal of Health Psychology*, *10*(3), 329–358. https://doi.org/10.1348/135910705X25697

Cockbain, E., & Laycock, G. (2010). Crime science. In *The SAGE Handbook of Criminological Theory* (Issue March 2017). https://doi.org/10.4135/9781446200926.n15

Cohen, L., Bell, R., Manion, L., Martin, S., McCulloch, G., Morrison, K., & O'Sullivan, C. (2011). *Research Methods in Education:* (7th ed.). Routledge.

Cohen, L. E., & Felson, M. (1979). Social Change and Crime Rate Trends: A Routine Activity Approach. *American Sociological Review*, *44*(4), 588–608.

Collier, D., & Levitskv, S. (2009). Conceptual Hierarchies in Comparative Research: The Case of Democracy. In D. Collier & J. Gerring (Eds.), *Concepts and. Method in the Social Science: The Tradition of Giovanni Sartori* (pp. 269–288). Routledge.

Conway, M. (2006). The subjective precision of computers: A methodological comparison with human coding in content analysis. *Journalism & Mass Communication Quarterly*, *83*(1), 186–200. https://doi.org/10.1177/107769900608300112

Cornish, D. B. (1994). The Procedural Analysis of Offending and its Relevance for Situational Prevention. *Crime Prevention Studies*, *3*(1), 151–196.

Cornish, D. B., & Clarke, R. V. (2017). The rational choice perspective. In R. Wortley & M. Townsley (Eds.), *Environmental Criminology and Crime Analysis* (2nd ed., pp. 29–61). Taylor & Francis Group. https://doi.org/10.4324/9781315709826

Coughlan, M., Cronin, P., & Ryan, F. (2009). Survey research: Process and limitations. *International Journal of Therapy and Rehabilitation*, *16*(1), 9–15. https://doi.org/10.12968/ijtr.2009.16.1.37935

Crown Prosecution Services. (2018). *Money Laundering Offences*. CPS. https://www.cps.gov.uk/legal-guidance/proceeds-crime-act-2002-part-7-money-laundering-offences

Cumberland, P. M. C. G., Bunce, C., Doré, C. J., Freemantle, N., & García-Fiñana, M. (2014). Ophthalmic statistics note: the perils of dichotomising continuous variables. *British Journal of Ophthalmology*, *98*(6), 841–843.

Däubler, T., Benoit, K., Mikhaylov, S., & Laver, M. (2012). Natural sentences as valid units for coded political texts. *British Journal of Political Science*, *42*(4), 937–951. https://doi.org/10.1017/S0007123412000105

de Graaf, R., & van der Vossen, R. (2013). Bits versus brains in content analysis. Comparing the advantages and disadvantages of manual and automated methods for content analysis. *Communications*, *38*(4), 433–443. https://doi.org/10.1515/commun-2013-0025

de Sola Pool, I. (1959). *Trends in Content Analysis*. University of Illinois Press.

De Vaus, D. (2001). *Research Design in Social Research*. SAGE Publications Ltd.

DeCuir-Gunby, J. T., Marshall, P. L., & McCulloch, A. W. (2011). Developing and using a

codebook for the analysis of interview data: An example from a professional development

research project. *Field Methods*, *23*(2), 136–155.
https://doi.org/10.1177/1525822X10388468

Dey, I. (1993). *Qualitative Data Analysis: A User Friendly Guide for Social Scientists*. Routledge.

Di Nicola, A., & Terenghi, F. (2016). Managing finances in the illicit tobacco trade in Italy. *Trends in Organized Crime*, *19*(3–4), 254–272. https://doi.org/10.1007/s12117-016-9274-3

Dijkers, M. P. J. M. (2009). The value of "traditional" reviews in the era of systematic reviewing. *American Journal of Physical Medicine and Rehabilitation*, *88*(5), 423–430. https://doi.org/10.1097/PHM.0b013e31819c59c6

Drisko, J., & Maschi, T. (2015). *Content Analysis*. Oxford University Press.

Edwards, A. (2017). *Strategy in War and Peace: A Critical Introduction*. Edinburgh University Press. https://doi.org/10.1002/9781119207290.ch03

Egmont Group. (2001). *FIUs in Action. 100 Cases from the Egmont Group*. http://www.egmontgroup.org/library/download/21?phpMyAdmin=1b8c4dca9046t6509c6bc%5Cnpapers3://publication/uuid/A2215E41-DFFC-4884-91A3-AF08A387A556

Ekblom, P. (1994). Proximal Circumstances: A Mechanism-Based Classification of Crime Prevention. In *Crime Prevention Studies* (pp. 185–232). Criminal Justice Press.

Ekblom, P. (2001). *The conjunction of criminal opportunity: A framework for crime reduction toolkits*.
https://www.researchgate.net/publication/228857406_The_conjunction_of_criminal_opportunity_A_framework_for_crime_reduction_toolkits

Ekblom, P. (2008). Designing Products Against Crime. In R. Wortley, L. Mazerolle, & S. Rombouts (Eds.), *Environmental Criminology and Crime Analysis* (pp. 195–220). Routledge.

Ekblom, P., & Tilley, N. (2000). Criminology , Situational Crime Prevention and the Resourceful Offender. *British Journal of Criminologyy*, *40*.

Emerald Publishing. (2022). *Journal of Money Laundering Control*. https://www.emeraldgrouppublishing.com/journal/jmlc

European Commission. (2017). *Report from the Commission to the European Parliament and the Council on the Assessment of the Risks of Money Laundering and Terrorist Financing affecting the Internal Market and relating to Cross-Border Activities*.

European Commission. (2018). *Statement By First Vice-President Timmermans, Vice-President Dombrovskis and Commissioner Jourovà on the adoption by the European Parliament of the 5th Anti-Money Laundering Directive*. http://europa.eu/rapid/press-release_STATEMENT-18-3429_en.htm

European Commission. (2019). *Report from the Commission to the European Parliament and the Council on the Assessment of the Risks of Money Laundering and Terrorist Financing affecting the Internal Market and relating to Cross-Border Activities*.

European Commission. (2021). *Anti-money laundering and countering the financing of terrorism legislative package*. https://ec.europa.eu/info/publications/210720-anti-money-laundering-countering-financing-terrorism_en

Europol. (2015). *Why is cash still king? A strategic report on the use of cash by criminal groups as a facilitator for money laundering*. https://doi.org/10.2813/698364

Everitt, B. S., Landau, S., Leese, M., & Stahl, D. (2011). *Cluster Analysis* (5th ed.). John Wiley

& Sons, Ltd. https://doi.org/10.1002/9780470611777.ch7

Fedorov, V., Mannino, F., & Zhang, R. (2009). Consequences of dichotomization. *Pharmaceutical Statistics*, *8*(1), 50–61. https://doi.org/10.1002/pst.331

Felson, M., & Clarke, R. V. G. (1998). *Opportunity Makes the Thief: Practical theory for crime prevention*.

Felson, M., & Clarke, R. V. (2012). Comments on the special issue. *Trends in Organized Crime 2012 15:2*, *15*(2), 215–221. https://doi.org/10.1007/S12117-012-9165-1

Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods*, *5*(1), 80–92. https://doi.org/10.1177/160940690600500107

Financial Action Task Force. (2015). *Money Laundering Through the Physical Transportation of Cash*.

Financial Action Task Force. (2016). *Guidance for a Risk Based Approach for Money or Value Transfer Services*. www.fatf-gafi.org/publications/fatfrecommendations/documents/rba-money-or-value-transfer.html

Financial Action Task Force. (2018a). *Guidance for a Risk-Based Approach Securities Sector*. www.fatf-gafi.org/publications/fatfrecommendations/documents/rba-securities-sector.html%0A©

Financial Action Task Force. (2018b). *Professional Money Laundering* (Issue July). www.fatf-gafi.org/publications/methodandtrends/documents/professional-money-laundering.html

Financial Action Task Force. (2021). *Methods and Trends*. Fatf-Gafi. https://www.fatf-gafi.org/publications/methodsandtrends/?hf=10&b=0&s=desc(fatf_releasedate)

Financial Action Task Force. (2022a). *Money Laundering*. https://www.fatf-gafi.org/faq/moneylaundering/#d.en.11223

Financial Action Task Force. (2022b). *Topic: Mutual Evaluations*. https://www.fatf-gafi.org/publications/mutualevaluations/?hf=10&b=0&s=desc(fatf_releasedate)

Financial Action Task Force. (2022c). *Who we are*. https://www.fatf-gafi.org/about/whoweare/

Financial Action Task Force, & Egmont Group of Financial Intelligence Units. (2013). *Money laundering and terrorist financing through trade in diamonds* (Issue October). http://www.fatf-gafi.org/publications/methodsandtrends/documents/ml-tf-through-trade-in-diamonds.html

Finch, H. (2005). Comparison of Distance Measures in Cluster Analysis with Dichotomous Data. *Journal of Data Science*, *3*(1), 85–100. https://doi.org/10.6339/JDS.2005.03(1).192

Franzosi, R. (2008). Content Analysis: Objective, Systematic, and Quantitative Description of Content. *Content Analysis*, *1*(1), xxi–xlix.

Fritz, C. A. E., & Morgan, G. A. (2010). Sampling. In N. J. Salkind (Ed.), *Encyclopedia of research design* (pp. 1303–1305). SAGE Publications, Inc. https://doi.org/10.5860/choice.48-2447

Gandal, N., Hamrick, J. T., Moore, T., & Oberman, T. (2018). Price manipulation in the Bitcoin ecosystem. *Journal of Monetary Economics*, *95*, 86–96. https://doi.org/10.1016/j.jmoneco.2017.12.004

Gao, Z., & Ye, M. (2007). A framework for data mining-based anti-money laundering research. *Journal of Money Laundering Control*, *10*(2), 170–179. https://doi.org/10.1108/13685200710746875

Gelemerova, L. Y. (2011). *The anti-money laundering system in the context of globalisation*.

Wolf Legal Publishers.

George, A. L., & Bennett, A. (2005). *Case Studies and Theory Development in the Social Sciences*. MIT Press.

Gilmour, N. (2014). Understanding Money Laundering – A Crime Script Approach. *The European Review of Organised Crime*, *1*(2), 35–56.

Gilmour, N. (2016). Preventing money laundering: a test of situational crime prevention theory. *Journal of Money Laundering Control*, *19*(4), 376–396. https://doi.org/10.1108/JMLC-10-2015-0045

Gilmour, N. (2021). Crime scripting the criminal activities of money laundering – holistically. *Journal of Money Laundering Control*. https://doi.org/10.1108/JMLC-09-2020-0109

Gilmour, N., & Ridley, N. (2015). Everyday vulnerabilities – money laundering through cash intensive businesses. *Journal of Money Laundering Control*, *18*(3), 293–303. https://doi.org/10.1108/JMLC-06-2014-0019

Gilmour, P. M. (2022). Reexamining the anti-money-laundering framework: a legal critique and new approach to combating money laundering. *Journal of Financial Crime*. https://doi.org/10.1108/jfc-02-2022-0041

Goertz, G., & Mahoney, J. (2012). *A Tale of Two Cultures: Qualitative and Quantitative Research in the Social Sciences*. Princeton University Press.

Google Scholar. (2019). *Google Scholar Search Tips*. https://scholar.google.com/intl/en/scholar/help.html#export

Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, *26*(2), 91–108. https://doi.org/10.1111/j.1471-1842.2009.00848.x

Grimmer, J., & Stewart, B. M. (2013). Text as data: The promise and pitfalls of automatic content analysis methods for political texts. *Political Analysis*, *21*(3), 267–297. https://doi.org/10.1093/pan/mps028

Guetzkow, H. (1950). Unitizing and categorizing problems in coding qualitative data. *Journal of Clinical Psychology*, *6*(1), 47–58. https://doi.org/10.1002/1097-4679(195001)6:1<47::AID-JCLP2270060111>3.0.CO;2-I

Hagan, F. E., & Daigle, L. E. (2020). *Introduction to Criminology. Theories, Methods, and Criminal Behavior* (10th ed.). SAGE Publications, Inc.

Han, J., Kamber, M., & Pei, J. (2012). *Data Mining: Concepts and Techniques* (Third). Morgan Kaufmann.

Hancock, G., & Laycock, G. (2013). Organised crime and crime scripts: Prospects for disruption. *Situational Prevention of Organised Crimes*, 172–192. https://doi.org/10.4324/9781843929727

Hands, S., & Everitt, B. (1987). A Monte Carlo Study of the Recovery of Cluster Structure in Binary Data by Hierarchical Clustering Techniques. *Multivariate Behavioural Research*, *22*, 235–243. https://doi.org/10.1207/s15327906mbr2202

Harvey, J., & Lau, S. F. (2009). Crime-money, reputation and reporting. *Crime, Law and Social Change*, *52*(1), 57–72. https://doi.org/10.1007/s10611-008-9173-x

Haworth, K. (2018). Tapes, transcripts and trials: The routine contamination of police interview evidence. *International Journal of Evidence and Proof*, *22*(4), 428–450. https://doi.org/10.1177/1365712718798656

He, P. (2010). A typological study on money laundering. *Journal of Money Laundering Control*, *13*(1), 15–32. https://doi.org/10.1108/13685201011010182

Heit, E. (2007). What Is Induction and Why Study It? In A. Feeney & E. Heit (Eds.), *Inductive Reasoning Experimental, Developmental, and Computational Approaches* (pp. 1–24). Cambridge University Press. https://doi.org/10.4324/9780429276309-1

Hennink, M., & Weber, M. B. (2013). Quality issues of court reporters and transcriptionists for qualitative research. *Qualitative Health Research*, *23*(5), 700–710. https://doi.org/10.1177/1049732313481502

HM Treasury, & Home Office. (2020). *National risk assessment of money laundering and terrorist financing 2020. Presented to Parliament pursuant to Regulation 16 of The Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017.*

Holsti, O. R. (1969). *Content Analysis for the Social Sciences and Humanities*. Addison-Wesley Publishing Company.

Hsieh, H., & Shannon, S. E. (2009). Three Approaches to Qualitative Content Analysis. *Qualitative Health Research*, *15*(9), 1277–1288. https://doi.org/10.1177/1049732305276687

Hutchings, A., & Holt, T. J. (2015). A crime script analysis of the online stolen data market. *British Journal of Criminology*, *55*(3), 596–614. https://doi.org/10.1093/bjc/azu106

Inner Temple Library. (2020). *Casetrack*. https://www.innertemplelibrary.org.uk/news/casetrack/

International Monetary Fund. (2006). *Financial Soundness Indicators: Compilation Guide*. International Monetary Fund. https://doi.org/10.5089/9781589063853.069

Irwin, A. S. M., Raymond Choo, K. K., & Liu, L. (2012). An analysis of money laundering and terrorism financing typologies. *Journal of Money Laundering Control*, *15*(1), 85–111.

https://doi.org/10.1108/13685201211194745

Irwin, A. S. M., Slay, J., Raymond Choo, K. K., & Lui, L. (2014). Money laundering and terrorism financing in virtual environments: a feasibility study. *Journal of Money Laundering Control*, *17*(1), 50–75. https://doi.org/10.1108/JMLC-06-2013-0019

Jacob, H. (1984). *Using Published Data*. SAGE Publications, Inc. https://doi.org/10.4135/9781412986472

Jancsics, D. (2017). Offshoring at Home? Domestic Use of Shell Companies for Corruption. *Public Integrity*, *19*(1), 4–21. https://doi.org/10.1080/10999922.2016.1200412

Jeffery, C. R. (1969). Crime Prevention and Control Through Environmental Engineering. *Criminology*, *7*(3), 35–58.

Jeffery, C. R. (1971). *Crime Prevention Through Environmental Design*. SAGE Publications.

Jollife, I. T., & Cadima, J. (2016). Principal component analysis: A review and recent developments. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, *374*(2065). https://doi.org/10.1098/rsta.2015.0202

Kadam, P., & Bhalerao, S. (2010). Sample size calculation. *International Journal of Ayurveda Research*, *1*(1), 55–57. https://doi.org/10.1016/j.aller.2013.03.008

Kastner, M., Tricco, A. C., Soobiah, C., Lillie, E., Perrier, L., Horsley, T., Welch, V., Cogo, E., Antony, J., & Straus, S. E. (2012). What is the most appropriate knowledge synthesis method to conduct a review? Protocol for a scoping review. *BMC Medical Research Methodology*, *12*, 1–10. https://doi.org/10.1186/1471-2288-12-114

Kaufman, L., & Rousseeuw, P. J. (2005). Finding Groups in Data: An Introduction to Cluster Analysis. In *Biometrics* (Vol. 47, Issue 2). John Wiley & Sons, Inc. https://doi.org/10.2307/2532178

King, G., Keohane, R. O., & Verba, S. (1994). *Designing Social Inquiry: Scientific Inference in Qualitative Research*.

Kleemans, E. R. (2015). Follow the Money. Introduction to the Special Issue 'Financial Aspects of Organized Crime.' *European Journal on Criminal Policy and Research*, *21*(2), 213–216. https://doi.org/10.1007/s10610-015-9279-5

Kleemans, E. R., Soudijn, M. R. J., & Weenink, A. W. (2013). Situational crime prevention and cross-border crime. *Situational Prevention of Organised Crimes*, 17–34. https://doi.org/10.4324/9781843929727

Krippendorff, K. (2019). *Content analysis: an introduction to its methodology* (4th ed.). SAGE Publications, Inc.

Kruisbergen, E. W., Kleemans, E. R., & Kouwenberg, R. F. (2015). Profitability, Power, or Proximity? Organized Crime Offenders Investing Their Money in Legal Economy. *European Journal on Criminal Policy and Research*, *21*(2), 237–256. https://doi.org/10.1007/s10610-014-9263-5

Lacy, S., Watson, B. R., Riffe, D., & Lovejoy, J. (2015). Issues and best practices in content analysis. *Journalism and Mass Communication Quarterly*, *92*(4), 791–811. https://doi.org/10.1177/1077699015607338

Lankhorst, F., & Nelen, H. (2005). Professional services and organised crime in the Netherlands. *Crime, Law and Social Change*, *42*(2–3), 163–188. https://doi.org/10.1007/s10611-005-5656-1

Law, J. (2018). Court of Appeal. In J. Law (Ed.), *A dictionary of law* (9th ed.). Oxford University Press.

Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the

methodology. *Implementation Science*, *5*(1), 69. https://doi.org/10.1186/1748-5908-5-69

Levi, M. (2002). Money Laundering and Its Regulation. *The ANNALS of the American Academy of Political and Social Science*, *582*(1), 181–194. https://doi.org/10.1177/000271620258200113

Levi, M. (2014). Money laundering. In *The Oxford Handbook of Organized Crime* (pp. 420–444). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199730445.001.0001

Levi, M. (2020). Making sense of professional enablers' involvement in laundering organized crime proceeds and of their regulation. *Trends in Organized Crime*. https://doi.org/10.1007/s12117-020-09401-y

Levi, M. (2022). Lawyers as money laundering enablers? An evolving and contentious relationship. *Global Crime*, 1–22. https://doi.org/10.1080/17440572.2022.2089122

Levi, M., & Reuter, P. (2006). Money Laundering. *Crime and Justice*, *34*(1), 289–375. https://doi.org/10.1086/501508

Levi, M., & Soudijn, M. R. J. (2020). Understanding the Laundering of Organized Crime Money. *Crime and Justice*, *49*(1), 579–631. https://doi.org/10.1086/708047

Lewis, S. C., Zamith, R., & Hermida, A. (2013). Content Analysis in an Era of Big Data: A Hybrid Approach to Computational and Manual Methods. *Journal of Broadcasting and Electronic Media*, *57*(1), 34–52. https://doi.org/10.1080/08838151.2012.761702

Littig, B. (2008). Interviews with the Elite and with experts. Are there any differences? *Forum Qualitative Sozialforschung*, *9*(3). https://doi.org/10.17169/fqs-9.3.1000

Lombard, M., Snyder-duch, J., & Bracken, C. C. (2002). Content Analysis in Mass Communication. *Human Communication Research*, *28*(4), 587–604.

https://doi.org/10.1111/j.1468-2958.2002.tb00826.x

Lord, N. J., Campbell, L. J., & van Wingerde, K. (2019). Other people's dirty money: Professional intermediaries, market dynamics and the finances of white-collar, corporate and organized crimes. *British Journal of Criminology*, *59*(5), 1217–1236. https://doi.org/10.1093/bjc/azz004

Lord, N. J., & Levi, M. (2017). Organizing the finances for and the finances from transnational corporate bribery. *European Journal of Criminology*, *14*(3), 365–389. https://doi.org/10.1177/1477370816661740

Lord, N. J., van Wingerde, K., & Campbell, L. (2018). Organising the Monies of Corporate Financial Crimes via Organisational Structures: Ostensible Legitimacy, Effective Anonymity, and Third-Party Facilitation. *Administrative Sciences*, *8*(2), 17. https://doi.org/10.3390/admsci8020017

Lovejoy, J., Watson, B. R., Lacy, S., & Riffe, D. (2014). Assessing the Reporting of Reliability in Published Content Analyses: 1985-2010. *Communication Methods and Measures*, *8*(3), 207–221. https://doi.org/10.1080/19312458.2014.937528

Lulham, R., Camacho Duarte, O., Dorst, K., & Kaldor, L. (2012). Designing a Counterterrorism Trash Bin. In P. Ekblom (Ed.), *Design Against Crime: Crime Proofing Everyday Products* (pp. 131–146). Lynne Rienner Publishers Inc. https://doi.org/10.1515/9781588269409-010

Malm, A., & Bichler, G. (2013). Using friends for money: The positional importance of money-launderers in organized crime. *Trends in Organized Crime*, *16*(4), 365–381. https://doi.org/10.1007/s12117-013-9205-5

Matanky-becker, R., & Cockbain, E. (2021). Behind the criminal economy : using UK tax fraud

investigations to understand money laundering myths and models. *Crime, Law and Social Change*. https://doi.org/10.1007/s10611-021-09997-4

Maxfield, M. G., & Babbie, E. R. (2015). *Research methods for criminal justice and criminology* (Seventh ed). Cengage learning.

Maxfield, M. G., & Babbie, E. R. (2016). *Basics of Research Methods for Criminal Justice and Criminology* (4th ed.). Cengage learning.

Mayhew, P., Clarke, R. V., Sturman, A., & Houqh, J. M. (1976). *Crime as Opportunity*.

Mayring, P. (2014). *Qualitative content analysis: theoretical foundation, basic procedures and software solution*. https://www.ssoar.info/ssoar/handle/document/39517

Mikhaylov, S., Laver, M., & Benoit, K. R. (2012). Coder reliability and misclassification in the human coding of party manifestos. *Political Analysis*, *20*(1), 78–91. https://doi.org/10.1093/pan/mpr047

Miles, M. B., Huberman, A. M., & Saldana, J. (2018). *Qualitative Data Analysis: A Methods Sourcebook* (4th ed.). SAGE Publications.

Milligan, G. W., & Cooper, M. C. (1987). Methodology Review: Clustering Methods. In *Applied Psychological Measurement* (Vol. 11, Issue 4, pp. 329–354). Sage PublicationsSage CA: Thousand Oaks, CA. https://doi.org/10.1177/014662168701100401

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Medicine*, *6*(7), 1–6. https://doi.org/10.1371/journal.pmed.1000097

Moore, T., Christin, N., & Szurdi, J. (2018). Revisiting the risks of bitcoin currency exchange closure. *ACM Transactions on Internet Technology*, *18*(4), 1–16.

https://doi.org/10.1145/3155808

Moreto, W. D. (2019). Provoked poachers? Applying a situational precipitator framework to examine the nexus between human-wildlife conflict, retaliatory killings, and poaching. *Criminal Justice Studies*, *32*(2), 63–80. https://doi.org/10.1080/1478601X.2019.1600816

Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, *18*(1), 1–7. https://doi.org/10.1186/s12874-018-0611-x

National Crime Agency. (2014). *High End Money Laundering Strategy and Action Plan*.

Neuendorf, K. A. (2017). *The Content Analysis Guidebook* (2nd ed.). SAGE Publications, Inc.

Neuendorf, K. A. (2019). Content analysis and thematic analysis. In P. Brough (Ed.), *Advanced research methods for applied psychology: design, analysis and reporting* (pp. 211–223). Routledge.

Neuendorf, K. A., Gore, T. D., Dalessandro, A., Janstova, P., & Snyder-Suhy, S. (2010). Shaken and stirred: A content analysis of women's portrayals in James Bond films. *Sex Roles*, *62*(11), 747–761. https://doi.org/10.1007/s11199-009-9644-2

Newman, O. (1972). *Crime Prevention Through Urban Design: Defensible Space*. Macmillan.

NVIVO. (2019). *What is NVivo?* https://www.qsrinternational.com/nvivo/what-is-nvivo

Office for National Statistics. (2022). *Average Sterling exchange rate: Euro XUMAERS*. https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/timeseries/thap/mret

Paré, G., Trudel, M. C., Jaana, M., & Kitsiou, S. (2015). Synthesizing information systems

knowledge: A typology of literature reviews. *Information and Management*, *52*(2), 183–199. https://doi.org/10.1016/j.im.2014.08.008

Pavitt, C. (2018). Reliability , Unitizing. In M. Allen (Ed.), *The SAGE Encyclopedia of Communication Research Methods* (pp. 1422–1424). SAGE Publications, Inc.

Pawelz, J. (2018). Researching gangs: How to reach hard-to-reach populations and negotiate tricky issues in the field. *Forum Qualitative Sozialforschung*, *19*(1). https://doi.org/10.17169/fqs-19.1.2878

Perry, S., Apel, R., Newman, G. R., & Clarke, R. V. (2017). The Situational Prevention of Terrorism: An Evaluation of the Israeli West Bank Barrier. *Journal of Quantitative Criminology*, *33*(4), 727–751. https://doi.org/10.1007/s10940-016-9309-6

Persaud, N. (2010). Primary Data Source. In N. J. Salkind (Ed.), *Encyclopedia of Research Design* (Vol. 3, pp. 1095–1097). SAGE Publications, Inc.

Peters, M. D. J., Godfrey, C. M., Khalil, H., McInerney, P., Parker, D., & Soares, C. B. (2015). Guidance for conducting systematic scoping reviews. *International Journal of Evidence-Based Healthcare*, *13*(3), 141–146. https://doi.org/10.1097/XEB.0000000000000050

Peterson, J., Pearce, P. F., Ferguson, L. A., & Langford, C. A. (2017). Understanding scoping reviews: Definition, purpose, and process. *Journal of the American Association of Nurse Practitioners*, *29*(1), 12–16. https://doi.org/10.1002/2327-6924.12380

Petrunov, G. (2011). Managing money acquired from human trafficking: Case study of sex trafficking from Bulgaria to Western Europe. *Trends in Organized Crime*, *14*(2–3), 165–183. https://doi.org/10.1007/s12117-011-9127-z

Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & Mcewen, S. A. (2014). A scoping review of scoping reviews: Advancing the approach and enhancing the

consistency. *Research Synthesis Methods*, *5*(4), 371–385. https://doi.org/10.1002/jrsm.1123

Platt, S. (2015). *Criminal Capital: How the Finance Industry Facilitates Crime*. Palgrave Macmillan.

Pope, C., Mays, N., & Popay, J. (2007). *Synthesizing qualitative and quantitative health evidence: a guide to methods*. Open University Press, McGraw Hill Education.

Porter, L. E. (2008). *Using Archival Data and Multidimensional Scaling to Explore Leadership: Examples from Group Crime*. https://www.semanticscholar.org/paper/Using-archival-data-and-multidimensional-scaling-to-Porter/9fe486baf751d64197cea60cf0e6fac5f4eb0352

Potter, W. J., & Levine-Donnerstein, D. (1999). Rethinking validity and reliability in content analysis. *Journal of Applied Communication Research*, *27*(3), 258–284. https://doi.org/10.1080/00909889909365539

Proceeds of Crime Act. (2002). *Proceeds of Crime Act 2002*.

ProQuest. (2019a). *Databases*. https://www.proquest.com/libraries/academic/databases/

ProQuest. (2019b). *ProQuest Central: About*.

Public Law Project. (2018). *An introduction to Judicial Review*. https://publiclawproject.org.uk/resources/an-introduction-to-judicial-review-2/

QSR International. (2020). *Cases*. https://help-nv.qsrinternational.com/12/win/v12.1.90-d3ea61/Content/cases/cases.htm

Ragin, C. (2014). *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies*. University of California Press.

Raiter, O. (2021). Applying Supervised Machine Learning Algorithms for Fraud Detection in Anti-Money Laundering. *Journal of Modern Issues in Business Research*, *1*(1), 14–26.

Reiter, B. (2013). The Epistemology and Methodology of Exploratory Social Science Research : Crossing Popper with Marcuse. *Government and International Affairs Faculty Publications.*, *Paper 99*.

Reiter, B. (2017). Theory and methodology of exploratory social science research. *International Journal of Science & Research Methodology*, *5*(4), 129–150.

Reuter, P., & Truman, E. M. (2004). *Chasing dirty money : the fight against money laundering*. Peterson Institute for International Economics.

Riccardi, M. (2014). When Criminals Invest in Businesses: Are We Looking in the Right Direction? An Exploratory Analysis of Companies Controlled by Mafia. In S. Caneppele & F. Calderoni (Eds.), *Organized Crime, Corruption and Crime Prevention. Essays in Honor of Ernesto U. Savona* (pp. 197–213). Springer International Publishing.

Riccardi, M. (2022). Organised Crime Infiltration of the COVID-19 Economy: Emerging schemes and possible prevention strategies. *European Law Enforcement Research Bulletin*, *5*, 33–43.

Riccardi, M., & Berlusconi, G. (2016). Measuring Organized Crime Infiltration in Legal Businesses. In E. U. Savona, M. Riccardi, & G. Berlusconi (Eds.), *Organised Crime in European Businesses* (pp. 16–34). Routledge. https://doi.org/10.4324/9781315640617

Riccardi, M., & Levi, M. (2018). Cash, Crime and Anti-Money Laundering. In C. King, C. Walker, & J. Gurulé (Eds.), *The Palgrave Handbook of Criminal and Terrorism Financing Law* (pp. 135–163). Springer International Publishing. https://doi.org/10.1007/978-3-319-64498-1_7

Riccardi, M., & Savona, E. U. (2013). *The identification of beneficial owners in the fight against money laundering*. http://www.transcrime.it/wp-content/uploads/2013/11/BOWNET3.pdf

Richet, J.-L. (2013). *Laundering Money Online: a review of cybercriminals methods*. *October 2013*. http://arxiv.org/abs/1310.2368

Riffe, D., Lacy, S., & Fico, F. (2014). *Analyzing Media Messages. Using Quantitative Content Analysis in Research* (3rd ed.). Routledge.

Romesburg, C. (2004). *Cluster Analysis for Researchers*. Lulu Press.

Rousseeuw, P. J. (1987). Silhouettes: A graphical aid to the interpretation and validation of cluster analysis. *Journal of Computational and Applied Mathematics*, *20*(C), 53–65. https://doi.org/10.1016/0377-0427(87)90125-7

Rucker, D. D., McShane, B. B., & Preacher, K. J. (2015). A researcher's guide to regression, discretization, and median splits of continuous variables. *Journal of Consumer Psychology*, *25*(4), 666–678. https://doi.org/10.1016/j.jcps.2015.04.004

Rusanov, G., & Pudovochkin, Y. (2018). Money laundering and predicate offenses: models of criminological and legal relationships. *Journal of Money Laundering Control*, *21*(1), 22–32. https://doi.org/10.1108/JMLC-12-2016-0048

Saldaña, J. (2021). *The Coding Manual Qualitative Researchers* (4th ed.). SAGE Publications Ltd.

Savona, E. U., & Riccardi, M. (2017). *Assessing the risk of money laundering in Europe. Final Report of Project IARM*. http://www.transcrime.it/iarm/

Savona, E. U., & Riccardi, M. (2018). *Mapping the risk of serious and organised crime infiltration in Europe - Final report of the MORE Project*.

Schmierbach, M. (2009). Content Analysis of Video Games: Challenges and Potential Solutions. *Communication Methods and Measures*, *3*(3), 147–172. https://doi.org/10.1080/19312450802458950

Schneider, F., Dreer, E., & Riegler, W. (2006). *Geldwäsche: Formen, Akteure, Größenordnung - und warum die Politik machtlos ist*. Betriebswirtschaftlicher Verlag Dr. Th. Gabler | GWV Fachverlage GmbH.

Schneider, S. (2004). Money laundering in Canada: a quantitative analysis of Royal Canadian Mounted Police cases. *Journal of Financial Crime*, *11*(3), 282–291. https://doi.org/10.1108/13590790410809220

Schott, P. A. (2006). *Reference Guide to Anti-Money Laundering and Combating the Financing of Terrorism. Second Edition and Supplement on Special Recommendation IX*.

Schreier, M. (2013). Qualitative Content Analysis. In U. Flick (Ed.), *The SAGE Handbook of Qualitative Data Analysis*. SAGE Publications Ltd. https://doi.org/10.4135/9781446282243

Scott, J. (1990). *A matter of record: documentary sources in social research*. Polity Press.

Seawright, J., & Collier, D. (2012). Glossary. In H. E. Brady & D. Collier (Eds.), *Rethinking Social Inquiry: Diverse Tools, Shared Standards* (2nd ed., pp. 173–197). Rowman & Littlefield Publishers, Inc.

Sokal, R. R. (1974). Classification: Purposes, Principles, Progress, Prospects. *American Association for the Advancement of Science*, *185*(4157), 1115–1123.

Soudijn, M. R. J. (2010). Wives, girlfriends and money laundering. *Journal of Money Laundering Control*, *13*(4), 405–416. https://doi.org/10.1108/13685201011083902

Soudijn, M. R. J. (2012). Removing excuses in money laundering. *Trends in Organized Crime*,

15(2–3), 146–163. https://doi.org/10.1007/s12117-012-9161-5

Soudijn, M. R. J. (2014). Using strangers for money: A discussion on money-launderers in organized crime. *Trends in Organized Crime*, *17*(3), 199–217. https://doi.org/10.1007/s12117-014-9217-9

Soudijn, M. R. J. (2016). Rethinking money laundering and drug trafficking: Some implications for investigators, policy makers and researchers. *Journal of Money Laundering Control*, *19*(3), 298–310. https://www.emerald.com/insight/content/doi/10.1108/JMLC-07-2015-0028/full/html

Soudijn, M. R. J. (2019). *Melvin R. J. Soudijn | Info*. https://www.researchgate.net/profile/Melvin_Soudijn2/info

Soudijn, M. R. J., & Reuter, P. (2016). Cash and carry: the high cost of currency smuggling in the drug trade. *Crime, Law and Social Change*, *66*, 271–290. https://doi.org/10.1007/s10611-016-9626-6

Srnka, K. J., & Koeszegi, S. T. (2007). From Words to Numbers: How to Transform Qualitative Data into Meaningful Quantitative Results. *Schmalenbach Business Review*, *59*(1), 29–57. https://doi.org/10.1007/bf03396741

Stebbins, R. (2001). *Exploratory Research in the Social Sciences*. SAGE Publications, Inc. https://doi.org/10.4135/9781412984249

Steinko, A. F. (2012). Financial channels of money laundering in Spain. *British Journal of Criminology*, *52*(5), 908–931. https://doi.org/10.1093/bjc/azs027

Sterling, S. (2015). Identifying money laundering: Analyzing suspect financial conduct against the speed, cost, and security of legitimate transactions. *Journal of Money Laundering Control*, *18*(3), 266–292. https://doi.org/10.1108/JMLC-08-2014-0025

Sue, V., & Ritter, L. (2012). *Conducting Online Surveys* (2nd ed.). SAGE Publications, Inc. https://doi.org/10.4135/9781506335186

Suendorf, U. (2001). *Geldwäsche. Eine kriminologische Untersuchung*. Hermann Luchterhand Verlag GmbH.

Sullivan, K. (2015). *Anti–Money Laundering in a Nutshell: Awareness and Compliance for Financial Personnel and Business Managers*. Apress. https://doi.org/10.1007/978-1-4302-6161-2

Swedberg, R. (2020). Exploratory research. In C. Elman, J. Gerring, & J. Mahoney (Eds.), *The Production of Knowledge: Enhancing Progress in Social Science* (pp. 17–41). Cambridge University Press.

Sydor, A. (2013). Conducting research into hidden or hard-to-reach populations. *Nurse Researcher*, *20*(3), 33–37. https://doi.org/10.7748/nr2013.01.20.3.33.c9495

Tax Justice Network. (2020a). *Narrative Report on the Netherlands*. http://www.financialsecrecyindex.com.

Tax Justice Network. (2020b). *Narrative Report on the United Kingdom*. https://fsi.taxjustice.net/PDF/UnitedKingdom.pdf

Teichmann, F. (2017). Twelve methods of money laundering. *Journal of Money Laundering Control*, *20*(2), 130–137. https://doi.org/10.1108/JMLC-05-2016-0018

Teichmann, F. (2019). Recent trends in money laundering and terrorism financing. *Journal of Financial Regulation and Compliance*, *27*(1), 2–12. https://doi.org/10.1108/JFRC-03-2018-0042

Teichmann, F. (2020). Money laundering in the jewellery business. *Journal of Money Laundering Control*. https://doi.org/10.1108/JMLC-03-2018-0020

Teichmann, F., & Falker, M.-C. (2020). *Money laundering through raw diamonds*. *Ahead-of-p*. https://doi.org/10.1108/JMLC-07-2019-0057

The Crown. (2020). *Form EX107: Order a transcript of court or tribunal proceedings*. https://www.gov.uk/government/publications/order-a-transcript-of-court-or-tribunal-proceedings-form-ex107

The Joanna Briggs Institute. (2015). *The Joanna Briggs Institute Reviewers' Manual 2015: Methodology for JBI scoping reviews* (Issue August). https://doi.org/10.1017/CBO9781107415324.004

Tilley, N., & Laycock, G. (2016). Engineering a Safer Society. *Public Safety Leadership: Research Focus Engineering*, *4*(2), 1–6.

Tiwari, M., Gepp, A., & Kumar, K. (2020). A review of money laundering literature: the state of research in key areas. *Pacific Accounting Review*, *32*(2), 271–303. https://doi.org/10.1108/PAR-06-2019-0065

Tourangeau, R. (2014). Defining hard-to-survey populations. In R. Tourangeau, B. Edwards, T. P. Johnson, K. M. Wolter, & N. Bates (Eds.), *Hard-to-Survey Populations* (pp. 3–20). Cambridge University Press. https://doi.org/10.1017/CBO9781139381635

Townend, J., & Wiener, C. (2021). *' Justice system data ': a comparative study.*

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K., Colquhoun, H., Kastner, M., Levac, D., Ng, C., Sharpe, J. P., Wilson, K., Kenny, M., Warren, R., Wilson, C., Stelfox, H. T., & Straus, S. E. (2016). A scoping review on the conduct and reporting of scoping reviews. *BMC Medical Research Methodology*, *16*(1), 1–10. https://doi.org/10.1186/s12874-016-0116-4

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J.,

Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., … Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, *169*(7), 467–473. https://doi.org/10.7326/M18-0850

Tricco, A. C., Tetzlaff, J., & Moher, D. (2011). The art and science of knowledge synthesis. *Journal of Clinical Epidemiology*. https://doi.org/10.1016/j.jclinepi.2009.11.007

Trozze, A., Kamps, J., Akartuna, E. A., Hetzel, F. J., Kleinberg, B., Davies, T., & Johnson, S. D. (2022). Cryptocurrencies and future financial crime. *Crime Science*, *11*(1), 1–35. https://doi.org/10.1186/s40163-021-00163-8

Unger, B. (2007). *The scale and impacts of money laundering*. Edward Elgar Publishing Limited. https://doi.org/10.4337/9781781007624

Unger, B. (2013). Introduction. In B. Unger & D. van der Linde (Eds.), *Research Handbook on Money Laundering* (pp. 3–18). Edward Elgar Publishing Limited.

Unger, B. (2017). Offshore activities and money laundering: recent findings and challenges. *European Parliament. Directorate-General for Internal Policies. Policy Department A: Economic and Scientific Policy*, 1–61. https://doi.org/10.2861/539319

Unger, B., & den Hertog, J. (2012). Water always finds its way: Identifying new forms of money laundering. *Crime, Law and Social Change*, *57*(3), 287–304. https://doi.org/10.1007/s10611-011-9352-z

Unger, B., Siegel, M., Ferwerda, J., Kruijf, W. de, Busuioic, M., Wokke, K., & Rawlings, G. (2006). *The amounts and the effects of money laundering. Report for the Ministry of Finance*.

University of Ljubljana. (2021). *Orange Data Mining*. https://orangedatamining.com/

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis:

Implications for conducting a qualitative descriptive study. In *Nursing and Health Sciences* (Vol. 15, Issue 3, pp. 398–405). https://doi.org/10.1111/nhs.12048

Vaithilingam, S., & Nair, M. (2007). Factors affecting money laundering: lesson for developing countries. *Journal of Money Laundering Control*, *10*(3), 352–366. https://doi.org/10.1108/13685200710763506

Valvi, E. A. (2022). The role of legal professionals in the European and international legal and regulatory framework against money laundering. *Journal of Money Laundering Control*. https://doi.org/10.1108/JMLC-12-2021-0139

van Duyne, P. C. (1998). *Money-Laundering : Pavlov ' s Dog and*. *37*(4), 359–374.

van Duyne, P. C. (2003). Money laundering policy. Fears and facts. In P. C. van Duyne, K. von Lampe, & J. Newell (Eds.), *Criminal Finances and Organising Crime in Europe* (Issue January, pp. 72–109). Wolf Legal Publishers.

van Duyne, P. C. (2007). Criminal finances and state of the art. Case for concern? In P. C. van Duyne, A. Maljevic, M. van Dijck, K. von Lampe, & J. Harvey (Eds.), *Crime business and crime money in Europe: The dirty linen of illegal enterprise* (pp. 69–95). Wolf Legal Publishers. http://ezproxy.neu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db =cja&AN=35186658&site=ehost-live&scope=site

van Duyne, P. C. (2013). Crime-money and financial conduct. In B. Unger & D. van der Linde (Eds.), *Research Handbook on Money Laundering* (pp. 232–250). Edward Elgar Publishing.

van Duyne, P. C., Harvey, J., & Gelemerova, L. (2018). *The Critical Handbook of Money Laundering. Policy, Analysis and Myth*. Palgrave Macmillan.

van Duyne, P. C., & Levi, M. (2005). *Drugs and money: managing the drug trade and crime-money in Europe*. Routledge. https://doi.org/10.4324/9780203481158

Van Evera, S. (1997). *Guide to Methods for Students of Political Science*. Cornell University Press.

van Koningsveld, J. (2013). Money laundering - "You don't see it, until you understand it": Rethinking the stages of the money laundering process to make enforcement more effective. In *Research Handbook on Money Laundering* (pp. 435–451). Edward Elgar Publishing. https://doi.org/10.4337/9780857934000.00044

Walker, J. (1999). How Big is Global Money Laundering ? *Journal of Money Laundering Control*, *3*(1), 25–37.

Ward, J. H. (1963). Hierarchical Grouping to Optimize an Objective Function. *Journal of the American Statistical Association*, *58*(301), 236–244.

Weber, R. (1990). *Basic Content Analysis* (2nd ed.). SAGE Publications, Inc. https://doi.org/10.4135/9781412983488

Werner, A., Lacewell, O., & Volkens, A. (2015). Manifesto Coding Instructions (5th revised edition). *Manifesto Research on Political Representation*, *February*, 1–38. https://manifestoproject.wzb.eu/down/papers/handbook_2014_version_5.pdf

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

White, M. D., & Marsh, E. E. (2006). Content analysis: A flexible methodology. *Library Trends*, *55*(1), 22–45. https://doi.org/10.1353/lib.2006.0053

Whittemore, R., Chao, A., Jang, M., Minges, K. E., & Park, C. (2014). Methods for knowledge

synthesis: An overview. *Heart and Lung: Journal of Acute and Critical Care*, *43*(5), 453–461. https://doi.org/10.1016/j.hrtlng.2014.05.014

Wilcox, P., & Cullen, F. T. (2018). Situational opportunity theories of crime. *Annual Review of Criminology*, *1*, 123–148. https://doi.org/10.1146/annurev-criminol-032317-092421

Wortley, R., & Mazerolle, L. (2008). Environmental criminology and crime analysis: Situating the theory, analytic approach and application. In R. Wortley, L. Mazerolle, & S. Rombouts (Eds.), *Environmental Criminology and Crime Analysis* (pp. 1–18). Routledge. https://doi.org/10.4324/9781315709826

Wortley, R., Sidebottom, A., Tilley, N., & Laycock, G. (2019). What is crime science? In R. Wortley, A. Sidebottom;, T. Nick, & G. Laycock (Eds.), *Routledge Handbook of Crime Science* (pp. 1–30). Routledge. https://doi.org/10.4324/9780203431405-1

Wright, K. B. (2006). Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services. *Journal of Computer-Mediated Communication*, *10*(3). https://doi.org/10.1111/j.1083-6101.2005.tb00259.x

Yim, O., & Ramdeen, K. T. (2015). Hierarchical Cluster Analysis: Comparison of Three Linkage Measures and Application to Psychological Data. *The Quantitative Methods for Psychology*, *11*(1), 8–21. https://doi.org/10.20982/tqmp.11.1.p008

Zamith, R., & Lewis, S. C. (2015). Content Analysis and the Algorithmic Coder: What Computational Social Science Means for Traditional Modes of Media Analysis. *Annals of the American Academy of Political and Social Science*, *659*(1), 307–318. https://doi.org/10.1177/0002716215570576

Appendices

Appendix I

Selected Databases

Name	Description	Date of coverage
ABI/INFORM Collection	Business, Management and Trade - scholarly and trade journal articles, dissertations, market reports, industry reports, business cases and global and trade news	1971 - current
Accounting, Tax & Banking Collection	This database contains essential publications for information about the financial services industry, including accounting, tax, banking, and industry trends.	1971 - current
Asian & European Business Collection	This database provides information pertinent to the study of business and finance topics across Asia and Europe, including academic journals, newspapers, newswires, and magazines.	1977 - current
Australia & New Zealand Database	This database covers major areas of study, including business, science, technology, engineering, social sciences, education, and humanities published in Australia and New Zealand.	Not reported
Business Market Research Collection	This database contains company, industry, economic and geopolitical market research.	1986 - current
Canadian Business & Current Affairs Database	Canada's reference and current events - scholarly journal articles, trade publications, dissertations, books, newspapers and magazines.	Not reported
Computer Science Database	This collection provides discipline-specific coverage spanning thousands of publications, many in full text.	Not reported

Continental Europe Database	Database including academic journals from subjects such as business, science, technology, engineering, social sciences, education, and humanities published in certain European countries.	Not reported
Criminal Justice Database	Criminal Justice Database is a comprehensive database supporting research on crime, its causes and impacts, legal and social implications, as well as litigation and crime trends.	1981 - current
Criminology Collection	Criminology and criminal justice - journal articles	1981 - current
Digital National Security Archive	This archive presents a vast, expertly curated, comprehensive collection of significant primary source documents, arranged in collections, that are central to U.S. foreign and military policy.	1945 - current
Documents on British Policy Overseas	DBPO allows researchers to gain a more complete understanding of the tensions, motivations, and relationships that shaped Europe and the world.	1898 – 1990
East & South Asia Database	Academic journals published in various East Asian and South Asian countries covering subjects like business, science, technology, engineering, social sciences, education, and humanities.	Not reported
East Europe, Central Europe Database	Database including academic journals published in East and Central Europe about business, science, technology, engineering, social sciences, education, and humanities	Not reported
Humanities Index	Indexing tool almost 400 internationally respected humanities journals, weekly magazines, and newspapers published in the UK and other English-speaking countries.	Not reported
India Database	Database is a multidisciplinary resource of scholarly journals published in India for subjects including business, medicine, science, technology, social sciences and humanities.	1998 – current
Latin America & Iberia Database	Full-text academic journals published in Latin American countries, Spain, and Portugal. Subjects included business, science, technology, engineering, social sciences, education, and humanities	Not reported

Middle East & Africa Database	Full-text academic journals published in Middle Eastern and African countries. Subjects covered business, science, technology, engineering, social sciences, education, and humanities.	Not reported
Military Database	Full-text database covering comprehensive scholarly output.	Not reported
Political Science Database	Political Science Database includes hundreds of leading political science, public policy, and international relations journals.	1985 - current
Politics Collection	International relations and political science - journal articles	1985 - current
Publicly Available Content Database	This database brings together or links to full text for publicly available content from a number of different sources from around the world.	Not reported
Research Library	Multidisciplinary subject coverage from scholarly, trade, and consumer publications.	Not reported
Science Database	This database is a resource for applied and general sciences featuring over 1030 titles, with more than 760 available in full text.	1986 – current
Social Science Database	Database indexing and hundreds of academic journals, providing coverage across social science disciplines.	Not reported
Sociology Collection	Sociology and social work - journal articles	1985 - current
Sociology Database	Database offering an index for hundreds of academic journals including anthropology, communication, criminology, economics, education, political science, psychology, social work, and sociology.	Not reported

Source: PQC (2019a)

Appendix II

General information

Citation	Lead author	Publication year	Scientific discipline	Reported research question/purpose	Type of research
Duyne (2003)	Petrus C. van Duyne	2003	Organised crime	"Is money laundering really as clear a phenomenon as legislators and jurists think it is?"	Descriptive
Duyne and Levi (van Duyne & Levi, 2005)	Petrus C. van Duyne	2005	Organised crime	"It will expand on the point of the techniques of laundering and describe what kind of money-management is actually observed."	Descriptive
Irwin et al. (2014)	Angela Samantha Maitland Irwin	2014	Money laundering	"To clarify the suitability of virtual environments for conducting money laundering and terrorism financing activities."	Descriptive
Irwin, Raymond Choo and Liu (2012)	Angela Samantha Maitland Irwin	2012	Money laundering	"To measure the size of the real-world money laundering and terrorism financing problem, identify potential threats and trends, the techniques employed and the amount of funds involved."	Descriptive
Petrunov (2011)	Georgi Petrunov	2011	Organised crime	"It provides an in-depth analysis of the bookkeeping and accounting practices, the distribution of the illegal proceeds within the organizations, the use of proceeds and the money laundering schemes related to human trafficking."	Descriptive

Schneider (2004)	Stephen Schneider	2004	Financial crime	"To analyse[...]how the money made from entrepreneurial criminal activity is disbursed through the legitimate economy."	Descriptive
Soudijn (2010)	Melvin R.J. Soudijn	2010	Money laundering	"To analyse the complicity of wives/girlfriends of a criminal if she benefits from the proceeds of the criminal's illicit activities"	Descriptive
Soudijn (2012)	Melvin R.J. Soudijn	2012	Organised crime	"This raises the question of whether the removing excuses technique might also prove fruitful as an approach to financial facilitators"	Descriptive
Soudijn (2016)	Melvin R.J. Soudijn	2016	Money laundering	"This raises the question of whether the actual investigation and prosecution of money laundering in relation to drugs emphasizes different aspects of the phenomenon than the three-stage model does and if so, which ones?"	Descriptive
Teichmann (2017)	Fabian Maximilian Johannes Teichmann	2017	Money laundering	"To discuss how feasible it is for intelligent criminals to circumvent existing anti-money laundering mechanisms."	Descriptive

Appendix III

Key concepts - Placement, Layering, Integration

Citation	Placement	Layering	Integration
Duyne (2003)	"Money is put into the financial system"	"The sum is divided into smaller amounts for smooth handling and criss-crossed between numerous bank accounts"	"The smaller amounts must be put together again"
Duyne and Levi (2005)	"Money is put into the financial system"	"The sum is divided into smaller amounts for smooth handling and criss-crossed between numerous bank accounts"	"The smaller amounts must be put together again"
Irwin et al. (2012)	"In the placement stage, the cash generated from crime is brought into the financial system."	"Once the proceeds of crime have been placed into the financial system, there is an attempt to conceal or disguise the source or ownership of the funds by creating complex layers of financial transactions"	"Integration of the cleaned money into the economy is the final stage of the process, and is accomplished by the launderer making it appear to have been legally earned"
Irwin et al. (2014)	"Placement of funds inside accounts"	"Layering involves distancing illegal proceeds from their source by creating complex levels of financial transactions designed to disguise the audit trail and to provide anonymity"	"Integration is the third and final stage of money laundering in which funds introduced into the financial system are invested or applied"
Petrunov (2011)	"In the placement phase, the illegal money goes through financial institutions, but this is not always the case"	"The layering phase is used to disguise the illegal origin of the proceeds. Traditionally, transactions in this phase are successive, with a series of transactions or layers"	"The last phase is integration, where the money is invested in legal businesses, once their criminal origin has been successfully disguised"

Schneider (2004)	"In the initial placement stage, the cash proceeds of crime are introduced into the legitimate economy, which essentially satisfies the conversion objective."	"Once this combined conversion placement goal has been met, a process of layering takes place, which involves circulating the funds through various sectors, companies, and commercial or financial transactions domestically and internationally to conceal"	"The penultimate stage of the money laundering process is termed integration because it is at this point that the funds are completely assimilated into the legal economy"
Soudijn (2010)	"In the placement phase, the criminal proceeds are put into financial circulation"	"In the concealment phase (also called the disguising or layering phase), the criminal origin of the money is hidden to make it appear legitimate"	"The integration phase (destination phase) ultimately involves spending or investing criminal proceeds"
Soudijn (2012)	"Placement refers to introducing the proceeds of crime into the legitimate financial system, by making deposits in bank accounts for instance"	"Next, in the layering phase, the origins of the criminal proceeds are concealed in the legitimate system, hidden using front companies, financial constructions, false invoices, etc"	"In this way, illicit funds are given a sheen of legitimacy so they can ultimately be put towards legitimate purchases or investments (e.g. buying a luxury car or starting up an export business)"
Soudijn (2016)	"In the placement stage, cash proceeds of crime are introduced into the financial system"	"In the layering stage, the unlawful origins of the money are obfuscated and it is lent a sheen of legitimacy that it might be used or invested in the legal economy"	"The integration stage denotes the phase in which the disguised criminal proceeds are spent or invested in legal economy"
Teichmann (2017)	"During the placement phase, illicitly gained assets are cleansed of the most obvious traces of illegality"	"Subsequently, the layering phase is used to create an accounting legend for these assets"	"Ultimately, these assets are integrated into the legal economy"

Appendix IV

Research methods

Citation	Data Collection	Unit of Observation	Number of Observations	Data Analysis	Country
Duyne (2003)	Not reported	Criminal recovery cases	52	Not reported	Netherlands
Duyne and Levi (2005)	Not reported	Criminal recovery cases	25	Not reported	Netherlands
Irwin et al. (2014)	Real-life experiment	ML and terrorism methods/typologies	6	Not reported	Not reported
Irwin, Raymond Choo and Liu (2012)	Not reported	Suspicious activity reports	184	Statistical analysis	Not reported
Petrunov (2011)	Semi-structured interviews	Sex workers, traffickers, law-enforcement representatives, prosecutors	152	Not reported	Bulgaria
Schneider (2004)	Standardised coded questionnaire	RCMP proceeds of crime case files	149	Statistical analysis	Canada
Soudijn (2010)	Interviews	Criminal investigations into organised crime	62	Not reported	Netherlands
Soudijn (2012)	Interviews	Criminal investigators	22	Not reported	Netherlands
Soudijn (2016)	Structured interviews	Employees of financial investigation departments	46	Not reported	Netherlands

| Teichmann (2017) | (a) Informal interviews, (b) Formal, semi-standardized expert interviews, (c) quantitative survey | (a) money launderers and their advisers, (b) anti-money laundering specialists, (c) compliance officers | (a) 10, (b) 18, (c) 181 | Qualitative content analysis | (a) Germany, Austria, Switzerland, Italy and the United Arab Emirates, (b) Germany, Austria, Liechtenstein, Switzerland and the UAE, (c) Germany, Austria, Liechtenstein and Switzerland |

Appendix V

List of included Full Judgment Transcripts

Name
Abou-Rahmah & Anor v Abacha & Ors (2006)
AFP Ball (R on the application of) v Harrow Crown Court (2015)
Belbin v Lille Court of First Instance (2013)
Campbell v Deputy Public Prosecutors Office in Bordeaux France (2015)
R v 1) Cadogan (Mark) 2) Lister (Timothy) 3) Hutchinson (Anthony) 4) Coyle (Lee) (2008)
R v 1) Maxwell (Duncan William) 2) MacDonald (Angus Stewart) 3) Ambrose (Sharon Lesley) (2009)
R v 1) Nazir (Tanveer) 2) Singh (Ajvinder) 3) Power (Manjit Singh) 4) Heaton (David Alwyn) (2007)
R v Abbas (Ayub) (2007)
R v Adebayo (Oladeji Tajudeen) (2006)
R v Ahmad (Mohammed Sabbhir (2015)
R v Ahmet (Ali) & Akam (Muhammed) (2006)
R v Akeroyd (Andrew Peter) (2009)
R v Akpan (Obiamaka) (2014)
R v Alexander (Ross) (2011)
R v Ali (Omar) (2008)
R v Appleton (John Paul) (2008)
R v Arabskyj (Paul) (2015)
R v Arampatzis (Petros) (2006)
R v Arora (Ajit) (2012)
R v Askew (Barry) (2010)
R v Austin (Herbert Charles) (2013)
R v Bagnall (Darren John) (2007)
R v Baker (Andrew) (2014)
R v Banaviciene (Reda) (2014)
R v Baron (Philip Michael) (2014)
R v Basra (Ajaib Singh) (2002)
R v Birch (Donald) (2012)
R v Blake (Leyton Ainsley) (2016)
R v Bowler-Degan (Tarn) (2014)
R v Bowles (Darren John) (2012)
R v Bowling (Darren) (2015)
R v Brown (Christopher Mark) (2013)
R v Brown (Victoria Louise) (2006)
R v Bui (Phu Ha) (2008)
R v Campbell (Simon) & Anr (2014)
R v Carmichael (Silva) (2013)
R v Carroll (Thomas Joseph) (2010)
R v Cave (Dennis James) (2008)
R v Choudhary (Aisha) & Anor (2012)
R v Chowdhury (Iftekhar) (2015)
R v Clark (Graham Charles) & McReedy (Jason Phillip) (2006)
R v Clark (John Paul) (2015)

R v Clottey (Wesley) & Ors (2014)
R v Cole (Adrian Donald) (2009)
R v Cole (Dean Marcel) (2014)
R v Colley (Julia) (2005)
R v Cooling (Peter Edward) (2006)
R v Coyle (John Joseph) (2011)
R v Cudbill (Simon James) (2008)
R v Dainty (Mark John) (2014)
R v Dakin (Nicholas George Edmond) (2004)
R v Dao (Vu Phong) (2008)
R v Davies (Victor) (2004)
R v Davis (Craig) (2008)
R v Driscoll (Darren) & Anr (2014)
R v Duff (Jonathan Michael) (2002)
R v El-Kurd (Ussama Sammy) (2000)
R v England (David) (2010)
R v Ertekin (Veysi) (2006)
R v Evans (Duncan) & Anor (2010)
R v Evans (Martin Roydon) (2005)
R v Everson (Louis), Soneji (Kamalesh), Bullen (David) (2001)
R v Fasko (Fatjon) (2014)
R v Fay (Tat) (2012)
R v French (Martin) (2010)
R v Gahir (Jerome Sheldon) (2010)
R v Gibson (Peter Richard) (2014)
R v Gill (Tarandeep Singh) (2016)
R v Gjurra (Eduart) (2016)
R v Gumble (Maria) (2013)
R v Hagan (Geoff) (2003)
R v Haidary (Jamshid) & Ors (2013)
R v Haigh (Maxine) (2007)
R v Haller (Jorg Paul) (2004)
R v Hanley (Kevin Steven) (2015)
R v Hardi (Anwar Omar) (2011)
R v Hargreaves (Christopher John) (2016)
R v Hussain (Adheel) (2013)
R v Hussain (Fazal) (2012)
R v Iannou (Jacovos) (2009)
R v Ibori (Theresa) (2011)
R v Imasuen (Osagie) (2014)
R v Jarvis (Edward Robert) (2004)
R v Jokic (Danilo) (2008)
R v K (I) (2007)
R v Kane (Peter Joseph) (2013)
R v Kasonga (Ishiaba) (2006)
R v Kelly (Wayne William) (2016)
R v Kerr (James) (2013)
R v Khan (Abdur) (2015)

R v Khan (Sahil) & Anr (2014)

R v Khan (Zishan Arif) (2015)

R v Kisieliauskas (Paulius) (2010)

R v Koli (Raj Kumar Dattaram) & Mee (Stephen John) (2010)

R v Kostenko (Yaroslav) (2013)

R v Kowalska (Magdalena) (2016)

R v Mahmood (Tariq) (2006)

R v Marsden (Darren James) (2016)

R v Marshall (Stewart) (2014)

R v Maxcime (Verity) (2006)

R v McCormack (Donal Christopher) (2006)

R v McKinley (Jason) (2016)

R v McSharry (Alan Joseph) (2013)

R v Mhlanga (Tadafzwa) (2011)

R v Michael (Xanthos John) (2003)

R v Midgley (Derek) (2008)

R v Mills (Jerome Champion) (2008)

R v Molloy (Paul) & Anr (2015)

R v Mullen (Kristian Michael) (2009)

R v Murgatroyd (Paul Anthony) (2016)

R v Nalborough (Brian) (2010)

R v Nasim (Amjad) (2009)

R v Nusi (Adewunmi) (2015)

R v Okunkpolor (Kelvin) (2014)

R v Olarinoye (Isaac) (2015)

R v O'Mahoney (Robert)R v Trotter (Gary) (2001)

R v Osborne (Joey) (2016)

R v Osman (Bulent) (2001)

R v Parkes (John Steven) (2004)

R v Parkes (Stephen) (2006)

R v Patel (Bharat) (2014)

R v Patel (Hanif) (2015)

R v Patel (Sarfaraz) (2014)

R v Pennington (Louise Catherine) (2014)

R v Pereira (Recardo) (2010)

R v Pham (Sinh Dang) (2008)

R v Pineda (J F) (2014)

R v Ptach (Piotr) (2016)

R v Quereshi (Mohammad) (2016)

R v R (2007)

R v Radford (Terence) (2013)

R v Rahim (Mohammed) (2013)

R v Rahman (Shamsur) (2015)

R v Rajmil (Muhammad) (2015)

R v Ramdas (Thomas) (2012)

R v Rankin (Ashley James) (2005)

R v Raza (Jameel) (2013)

R v Riyas (Mohammed) (2014)

Appendix VI

Code Set for Sample 1

Name	Description	Code Development	Source
Circumstances	Contextual Information about Money Laundering.	Inductive	Full judgment transcripts
Exportation	Movement of Criminal Assets to another Country.	Deductive	Petrunov (2011); Soudijn (2016); van Duyne (2003); van Duyne and Levi(van Duyne & Levi, 2005)
Integration	Spending and Investment of Criminal Assets.	Deductive	Irwin, et al. (2012); Petrunov (2011); Soudijn (2010, 2012, 2016)
Intermediate Actions	Preparational activities that take place before, after, or in between steps.	Inductive	Full judgment transcripts
Justification	Creation of a False Legitimate Origin for Criminal Assets.	Deductive	Petrunov (2011); van Duyne (2003); van Duyne and Levi (2011)
Layering	Financial Transactions of Criminal Assets.	Deductive	Irwin et al. (2012); Irwin, Slay, Raymond Choo, and Lui (2014); van Duyne (2003); van Duyne and Levi (2011); Schneider (2004)
Ownership	Change of the Nominal Ownership of Criminal Assets.	Deductive	van Duyne (2003); van Duyne and Levi (van Duyne & Levi, 2005)
Placement	Introduction of Criminal Assets into the Financial System.	Deductive	Irwin, et al. (2012); Petrunov (2011); Soudijn (2010, 2012, 2016); van Duyne (2003); van Duyne and Levi (2011)
Predicate Offence	Criminal Offence generating the Criminal Asset being laundered.	Deductive	Bell, (2002); Levi & Reuter, 2006; Reuter & Truman, 2004; Unger et al., (2006); van Duyne, Harvey, and Gelemerova, (2018)

Storage	Keep Criminal Assets for Future Use.	Inductive	Full judgment transcripts
Transportation	Physical Movement of Criminal Assets.	Inductive	Full judgment transcripts
Untraceable	Removing Criminal Assets from Financial Accounts.	Deductive	van Duyne (2003); van Duyne and Levi (2005)

Appendix VII

Code Set for Sample 2

Name	Description
Full Judgment Transcript: Name	Names of the Parties and Year
Criminal Asset: Type	Type of Monetary and Non-Monetary Criminal Asset
Criminal Asset: Amount	Amount of Monetary and Non-Monetary Criminal Asset
Criminal Asset: Currency (if applicable)	Currency of Monetary Criminal Asset
Criminal Asset: Low Amount	Amount of Monetary Criminal Assets below £60,000
Criminal Asset: High Amount	Amount of Monetary Criminal Assets above £60,000
Predicate Offence: Cigarette Smuggling	Criminal Asset is generated through Cigarette Smuggling
Predicate Offence: Corruption	Criminal Asset is generated through Corruption
Predicate Offence: Cyber Crime	Criminal Asset is generated through Cyber Crime
Predicate Offence: Drug Trafficking	Criminal Asset is generated through Drug Trafficking
Predicate Offence: Fraud	Criminal Asset is generated through Fraud
Predicate Offence: Jewellery Smuggling	Criminal Asset is generated through Jewellery Smuggling
Predicate Offence: Illegal Prostitution	Criminal Asset is generated through Illegal Prostitution
Predicate Offence: Tax Evasion	Criminal Asset is generated through Tax Evasion
Predicate Offence: Theft	Criminal Asset is generated through Theft
Money Laundering Stage: Conversion	Deliberate Exchange of the Criminal Asset into another Asset
Money Laundering Stage: Exportation	Movement of Criminal Assets to another Country
Money Laundering Stage: Integration	Spending and Investment of Criminal Assets
Money Laundering Stage: Justification	Creation of a False Legitimate Origin for Criminal Assets.
Money Laundering Stage: Layering	Financial Transactions of Criminal Assets
Money Laundering Stage: Ownership Change	Change of the Nominal Ownership of Criminal Assets
Money Laundering Stage: Placement	Introduction of Criminal Assets into the Financial System
Money Laundering Stage: Possession	Found in Control of a Criminal Asset
Money Laundering Stage: Storage	Keep Criminal Assets for Future Use
Money Laundering Stage: Transportation	Physical Movement of Criminal Assets

Money Laundering Stage: Untraceable	Removing Criminal Assets from Financial Accounts
Logistical Environment: Family and Friends	Co-Offenders with Social Ties to the Offender
Logistical Environment: Professionals	Expert assisting in the Money Laundering Process
Logistical Environment: Organised Crime Groups	Participation of an Organised Crime Group
Money Laundering Method: Financial Account	Usage of Financial Accounts
Money Laundering Method: Airplane	Usage of Commercial Airlines
Money Laundering Method: Cash/Safety Deposit Box	Rental of a Cash/Safety Deposit Box
Money Laundering Method: Broker Services	Usage of Cash
Money Laundering Method: Cab	Hire a Cab
Money Laundering Method: Cash	Usage of Cash
Money Laundering Method: Chauffeur Services	Hire Chauffeur Services
Money Laundering Method: Cheques/Bank Drafts	Usage of Cheques or Bank Drafts
Money Laundering Method: Counting Machine	Usage of Counting Machines
Money Laundering Method: Credit/Debit Card	Usage of Credit/Debit Cards
Money Laundering Method: Currency Exchange	Use of Currency Exchange Services
Money Laundering Method: Legal Services	Use of Legal Services
Money Laundering Method: Holdall/Suitcase/Rucksack	Usage of Bags
Money Laundering Method Phone	Usage of Telephones
Money Laundering Method: Safe	Secure box where valuable things are stored
Money Laundering Method: Vehicle	Use of any Type of Automobiles.
Money Laundering Method: Vessel	Usage of Ships
Money Laundering Method: Wire Transfer	Electronic Transfer of Criminal Assets
Front Company: Car Dealership	Car Dealership Associated with Offenders
Front Company: Money Exchange Business	Money Exchange Business Associated with Offenders
Front Company: Holding	Holding Associated with Offenders
Front Company: Industrial Unit	Industrial Unit Associated with Offenders
Front Company: Logistics Company	Logistics Company Associated with Offenders
Front Company: Lorry Dealership	Lorry Dealership Shop Associated with Offenders
Front Company: Money Service Business	Money Service Business Associated with Offenders
Front Company: Motorcycle Shop	Motorcycle Shop Associated with Offenders
Front Company: Real Estate and Letting Agency	Real Estate and Letting Agency Associated with Offenders

Front Company: Shell Company	Shell Company Associated with Offenders
Front Company: Solicitor Firm	Solicitor Firm Associated with Offenders
Front Company: Self-Storage Unit	Self-Storage Unit Associated with Offenders
Front Company: Trust	Trust Associated with Offenders
Front Company: Scrap Metal and Haulage Yard	Scrap Metal and Haulage Yard Associated with Offenders
Location: Hotel	Money Laundering Incidents took place at a Hotel
Location: Street	Money Laundering Incidents took place on a Street
Location: Residential Building	Money Laundering Incidents took place at a Residential Building
Location: Airport	Money Laundering Incidents took place at an Airport
Location: Bank Branch	Money Laundering Incidents took place at a Bank Branch
Location: Commercial Building (Unspecified)	Money Laundering Incidents took place at an unspecified Commercial Building
Location: Money Business	Money Laundering Incidents took place at a Money Service Business
Location: McDonald's Restaurant	Money Laundering Incidents took place at a McDonald's Restaurant
Location: Betting Shop	Money Laundering Incidents took place at a Betting Shop
Location: Storage Unit	Money Laundering Incidents took place at a Storage Unit
Location: Department Store	Money Laundering Incidents took place at a Department Store
Location: Café	Money Laundering Incidents took place at a Café
Location: Car Park	Money Laundering Incidents took place at a Car Park
Location: Service Station	Money Laundering Incidents took place at a Service Station
Location: Car Ferry	Money Laundering Incidents took place at a Car Ferry
Location: Industrial Park	Money Laundering Incidents took place at an Industrial Park
Location: Car Dealership	Money Laundering Incidents took place at a Car Dealership
Location: Pawnshop	Money Laundering Incidents took place at a Pawnshop
Location: Sportswear Store	Money Laundering Incidents took place at a Sportswear Store
Location: Scrap Metal and Haulage Yard	Money Laundering Incidents took place at a Scrap Metal and Haulage Yard
Location: Solicitor Office	Money Laundering Incidents took place at a Solicitor's Office
Location: Train Station	Money Laundering Incidents took place at a Train Station
Location: Model Train Shop	Money Laundering Incidents took place at a Model Train Shop

Appendix VIII

Word Count: Exportation

Word	Count	Weighted Percentage (%)	Similar Words
account	12	2.81	account, accounts
bank	9	2.11	bank, banks
euros	8	1.87	euro, euros
transferred	8	1.87	transfer, transferred
2002	5	1.17	2002
candice	5	1.17	candice, 'candice
may	5	1.17	may
money	4	0.94	money
returning	4	0.94	return, returned, returning
two	4	0.94	two
australia	3	0.70	australia
called	3	0.70	called
case	3	0.70	case
dublin	3	0.70	dublin
following	3	0.70	following
found	3	0.70	found
holdall	3	0.70	holdall
just	3	0.70	just
nicholas	3	0.70	nicholas
015	3	0.70	015, 015'
sums	3	0.70	sum, sums
019	2	0.47	019, 019'
200	2	0.47	200
2011	2	0.47	2011
address	2	0.47	address
amsterdam	2	0.47	amsterdam
april	2	0.47	april
arrest	2	0.47	arrest, arrested
benefit	2	0.47	benefit
client	2	0.47	client
commerzbank	2	0.47	commerzbank
consultants	2	0.47	consultants
contained	2	0.47	contained, containing
crown	2	0.47	crown
customs	2	0.47	customs
driver	2	0.47	driver
equity	2	0.47	equity
equivalent	2	0.47	equivalent
flew	2	0.47	flew
france	2	0.47	france, francs
held	2	0.47	held

heung	2	0.47	heung
holdings	2	0.47	holdings
holyhead	2	0.47	holyhead
hours	2	0.47	hours
krul	2	0.47	krul
kwan	2	0.47	kwan
later	2	0.47	later
lee	2	0.47	lee
london	2	0.47	london

Appendix IX

Word Count: Integration

Word	Count	Weighted Percentage (%)	Similar Words
purchased	30	3.92	purchase, purchased
paid	14	1.83	paid
cash	13	1.70	cash
used	13	1.70	used, using
account	10	1.31	account, accounts
count	9	1.18	count, counts
bank	8	1.05	bank
deposit	8	1.05	deposit
exchange	8	1.05	exchange, exchanged
mortgage	8	1.05	mortgage
property	8	1.05	property
bought	7	0.92	bought
car	7	0.92	car
related	5	0.65	related, relating, relation
2008	5	0.65	2008
april	5	0.65	april
arrest	5	0.65	arrest
card	5	0.65	card, cards
converted	5	0.65	convert, converted
obtained	5	0.65	obtained
spent	5	0.65	spent
cheque	4	0.52	cheque, cheques
currency	4	0.52	currency
dutch	4	0.52	dutch
guilders	4	0.52	guilders
house	4	0.52	house
january	4	0.52	january
may	4	0.52	may
part	4	0.52	part
sum	4	0.52	sum
two	4	0.52	two
worth	4	0.52	worth
1996	3	0.39	1996
250	3	0.39	250
300	3	0.39	300
400	3	0.39	400
500	3	0.39	500
also	3	0.39	also
another	3	0.39	another
balance	3	0.39	balance
bmw	3	0.39	bmw

debit	3	0.39	debit
euros	3	0.39	euros
involved	3	0.39	involved, involving
july	3	0.39	july
name	3	0.39	name, named
occasion	3	0.39	occasion, occasions
pay	3	0.39	pay, paying
proceeds	3	0.39	proceeds
repayments	3	0.39	repayments

Appendix X

Word Count: Intermediate Stage

Word	Count	Weighted Percentage (%)	Similar Words
account	12	1.29	account, accounts
money	11	1.19	money
got	10	1.08	got
van	10	1.08	van
car	9	0.97	car
drove	9	0.97	drove
hotel	9	0.97	hotel
opened	9	0.97	open, opened, opening
vehicles	9	0.97	vehicle, vehicles
driving	8	0.86	drive, driving
parked	8	0.86	park, parked
seen	8	0.86	seen
two	8	0.86	two
back	7	0.76	back
went	7	0.76	went
bank	7	0.76	bank, banking, banks
cash	6	0.65	cash
short	6	0.65	short, shortly
returned	6	0.65	return, returned
2008	5	0.54	2008
details	5	0.54	details
excel	5	0.54	excel
holdall	5	0.54	holdall, holdalls
laundered	5	0.54	laundered, launderers, laundering
man	5	0.54	man
number	5	0.54	number
saw	5	0.54	saw
taxi	5	0.54	taxi
2007	4	0.43	2007
accused	4	0.43	accused
ali	4	0.43	ali
associates	4	0.43	associate, associated, associates
bag	4	0.43	bag, bags
bmw	4	0.43	bmw
called	4	0.43	called, calls
fictitious	4	0.43	fictitious
front	4	0.43	front
hand	4	0.43	hand, hands

january	4	0.43	january
may	4	0.43	may
officers	4	0.43	officers
phone	4	0.43	phone
sale	4	0.43	sale, sales
telephone	4	0.43	telephone, telephoned, telephones
transfer	4	0.43	transfer
ahmet	3	0.32	ahmet
also	3	0.32	also
company	3	0.32	company
conversation	3	0.32	conversation
door	3	0.32	door

Appendix XI

Word Count: Justification

Word	Count	Weighted Percentage (%)	Similar Words
false	9	4.55	false, falsely
account	6	3.03	account, accounts
company	4	2.02	company
documents	4	2.02	documentation, documents
new	4	2.02	new
number	4	2.02	number, numbers
vehicle	4	2.02	vehicle, vehicles
bank	3	1.52	bank
cloned	3	1.52	cloned, cloning
focus	3	1.52	focus
june	3	1.52	june
name	3	1.52	name
numberplate	3	1.52	numberplate, numberplates
obtain	3	1.52	obtain, obtained
order	3	1.52	order
purported	3	1.52	purported, purportedly, purporting
service	3	1.52	service, serviced
stolen	3	1.52	stolen
vin	3	1.52	vin
create	2	1.01	create, created
fictitious	2	1.01	fictitious
indicate	2	1.01	indicate, indicating
invoice	2	1.01	invoice, invoices
monies	2	1.01	monies
registered	2	1.01	registered
series	2	1.01	series
southampton	2	1.01	southampton
supported	2	1.01	supported
way	2	1.01	way
absent	1	0.51	absent
black	1	0.51	black
blue	1	0.51	blue
bogus	1	0.51	bogus
called	1	0.51	called
cards	1	0.51	cards
chains	1	0.51	chains
change	1	0.51	change
checks	1	0.51	checks
computer	1	0.51	computer

contact	1	0.51	contact
control	1	0.51	control
credit	1	0.51	credit

Appendix XII

Word Count: No Code Applies

Word	Count	Weighted Percentage (%)	Similar Words
cash	10	3.70	cash, cashed
found	9	3.33	found
arrested	8	2.96	arrest, arrested
possession	8	2.96	possession
car	4	1.48	car
count	4	1.48	count, counts
later	4	1.48	later
note	4	1.48	note, notes
searched	4	1.48	searched
sold	4	1.48	sold
two	4	1.48	two
cheque	3	1.11	cheque
sum	3	1.11	sum, sums
total	3	1.11	total, totalled, totalling
vehicle	3	1.11	vehicle, vehicles
200	2	0.74	200
contain	2	0.74	contain, containing
day	2	0.74	day, days
issued	2	0.74	issued
just	2	0.74	just
laundered	2	0.74	laundered, laundering
made	2	0.74	made
money	2	0.74	money
name	2	0.74	name
occasion	2	0.74	occasion
one	2	0.74	one
person	2	0.74	person
relating	2	0.74	relating, relation
respect	2	0.74	respect
subject	2	0.74	subject
113	1	0.37	113
11th	1	0.37	11th
12th	1	0.37	12th
139	1	0.37	139
14january2011	1	0.37	14january2011
180	1	0.37	180
187	1	0.37	187
1996	1	0.37	1996
2005	1	0.37	2005

2006	1	0.37	2006
293	1	0.37	293
300	1	0.37	300
322	1	0.37	322
408	1	0.37	408
480	1	0.37	480
520	1	0.37	520
577	1	0.37	577
580	1	0.37	580
600	1	0.37	600
615	1	0.37	615

Appendix XIII

Word Count: Layering

Word	Count	Weighted Percentage (%)	Similar Words
account	20	9.90	account, accounts
bank	10	4.95	bank
transferred	10	4.95	transfer, transferred
paid	8	3.96	paid
name	5	2.48	name
two	4	1.98	two
hsbc	3	1.49	hsbc
draft	3	1.49	draft, drafts
sum	3	1.49	sum, sums
2008	2	0.99	2008
500	2	0.99	500
cheque	2	0.99	cheque, cheques
five	2	0.99	five
instructed	2	0.99	instructed, instructions
january	2	0.99	january
june	2	0.99	june
lloyds	2	0.99	lloyds
made	2	0.99	made
money	2	0.99	money
odd	2	0.99	odd
one	2	0.99	one
opened	2	0.99	opened
payment	2	0.99	payment, payments
separate	2	0.99	separate
singh	2	0.99	singh
transactions	2	0.99	transactions
16th	1	0.50	16th
1st	1	0.50	1st
200	1	0.50	200
2009	1	0.50	2009
2012	1	0.50	2012
22nd	1	0.50	22nd
25th	1	0.50	25th
26th	1	0.50	26th
400	1	0.50	400
487	1	0.50	487
585	1	0.50	585
602	1	0.50	602
700	1	0.50	700
775	1	0.50	775
800	1	0.50	800

adamson	1	0.50	adamson
afternoon	1	0.50	afternoon
another	1	0.50	another
applied	1	0.50	applied
approximately	1	0.50	approximately
asked	1	0.50	asked
august	1	0.50	august
balance	1	0.50	balance
barely	1	0.50	barely

Appendix XIV

Word Count: Ownership Change

Word	Count	Weighted Percentage (%)	Similar Words
account	107	4.00	account, accounts
money	48	1.80	money
transferred	47	1.76	transfer, transferred, transferring, transfers
bank	33	1.23	bank
cash	31	1.16	cash
company	28	1.05	companies, company
sum	27	1.01	sum, sums
bags	26	0.97	bag, bags
paid	26	0.97	paid
name	25	0.94	name, named, namely, names
called	22	0.82	call, called
cheque	22	0.82	cheque, cheques
count	21	0.79	count, counts
one	21	0.79	one
hands	19	0.71	hand, handed, handing, hands
laundering	18	0.67	launder, laundered, laundering
cars	18	0.67	car, cars
two	18	0.67	two
containing	17	0.64	contain, contained, containing
used	17	0.64	use, used, using
man	14	0.52	man
another	13	0.49	another
vehicle	13	0.49	vehicle, vehicles
500	12	0.45	500
deposit	12	0.45	deposit, deposited
found	11	0.41	found
given	11	0.41	given
accused	10	0.37	accused
arrested	10	0.37	arrest, arrested
holdall	10	0.37	holdall, holdalls
monies	10	0.37	monies
observed	10	0.37	observed
box	9	0.34	box, boxes
day	9	0.34	day, days
passed	9	0.34	pass, passed, passing
gave	9	0.34	gave
got	9	0.34	got

suitcase	9	0.34	suitcase
took	9	0.34	took
2012	8	0.30	2012
involved	8	0.30	involved
made	8	0.30	made
may	8	0.30	may
business	7	0.26	business, businesses
controlled	7	0.26	control, controlled, controller
payment	7	0.26	payment, payments
received	7	0.26	received, receiving
boot	7	0.26	boot
case	7	0.26	case
collecting	7	0.26	collect, collected, collecting

Appendix XV

Word Count: Placement

Word	Count	Weighted Percentage (%)	Similar Words
accounts	11	9.82	account, accounts
paid	7	6.25	paid
bank	5	4.46	bank
cash	5	4.46	cash
deposit	3	2.68	deposit, deposited, depositing
pay	3	2.68	pay, paying
money	3	2.68	money
500	2	1.79	500
different	2	1.79	different
may	2	1.79	may
080	1	0.89	080
17th	1	0.89	17th
2001	1	0.89	2001
2002	1	0.89	2002
2006	1	0.89	2006
2009	1	0.89	2009
2011	1	0.89	2011
22nd	1	0.89	22nd
23rd	1	0.89	23rd
24th	1	0.89	24th
2nd	1	0.89	2nd
880	1	0.89	880
900	1	0.89	900
accepted	1	0.89	accepted
accumulated	1	0.89	accumulated
admitted	1	0.89	admitted
around	1	0.89	around
asked	1	0.89	asked
august	1	0.89	august
barclays	1	0.89	barclays
basis	1	0.89	basis
bills	1	0.89	bills
bury	1	0.89	bury
care	1	0.89	care
count	1	0.89	count
debts	1	0.89	debts
divide	1	0.89	divide
facilitate	1	0.89	facilitate
favour	1	0.89	favour
february	1	0.89	february
forex	1	0.89	forex

held	1	0.89	held
help	1	0.89	help
karimzada	1	0.89	karimzada
lloyds	1	0.89	lloyds
mazar	1	0.89	mazar
mother	1	0.89	mother
number	1	0.89	number
observed	1	0.89	observed
period	1	0.89	period

Word Count: Storage

Word	Count	Weighted Percentage (%)	Similar Words
found	56	5.34	found
cash	48	4.58	cash
searched	24	2.29	search, searched
home	22	2.10	home, homes
recovered	19	1.81	recover, recovered
containing	15	1.43	contain, contained, containing
house	15	1.43	house
box	14	1.33	box, boxes
count	13	1.24	count, counting, counts
also	12	1.14	also
police	12	1.14	police
safe	11	1.05	safe, safes
total	11	1.05	total, totalling
bag	10	0.95	bag, bags
money	10	0.95	money
officers	10	0.95	office, officers
account	9	0.86	account, accounted, accounting, accounts
two	8	0.76	two
bedroom	8	0.76	bedroom, bedrooms
arrest	7	0.67	arrest, arrested
sum	7	0.67	sum, sums
bank	7	0.67	bank
notes	6	0.57	notes
premises	6	0.57	premises
related	6	0.57	related, relating
room	6	0.57	room
address	5	0.48	address
euros	5	0.48	euro, euros
flat	5	0.48	flat
just	5	0.48	just
quantity	5	0.48	quantities, quantity
time	5	0.48	time
various	5	0.48	various
100	4	0.38	100
accused	4	0.38	accused
another	4	0.38	another
concealed	4	0.38	concealed
documents	4	0.38	documents
drugs	4	0.38	drug, drugs

grams	4	0.38	grams
mobile	4	0.38	mobile
seized	4	0.38	seized
separate	4	0.38	separate, separated
amounts	3	0.29	amount, amounts
approximately	3	0.29	approximate, approximately
day	3	0.29	day, days
deposit	3	0.29	deposit, deposited
locations	3	0.29	located, locations
machine	3	0.29	machine, machines
placed	3	0.29	placed, places

Appendix XVII

Word Count: Transportation

Word	Count	Weighted Percentage (%)	Similar Words
cash	33	3.63	cash
found	31	3.41	found
containing	24	2.64	contain, contained, containing
bags	22	2.42	bag, bags
stopped	16	1.76	stopped
officers	10	1.10	office, officer, officers, offices
police	9	0.99	police
possession	9	0.99	possession
searched	9	0.99	search, searched
arrested	8	0.88	arrest, arrested
car	8	0.88	car, cars
money	8	0.88	money
sum	8	0.88	sum, sums
one	7	0.77	one
two	7	0.77	two
100	6	0.66	100
box	6	0.66	box
london	6	0.66	london
driving	6	0.66	drive, driving
carried	5	0.55	carried, carrying
holdall	5	0.55	holdall, holdalls
drove	5	0.55	drove
january	5	0.55	january
may	5	0.55	may
travelled	5	0.55	travel, travelled
vehicle	5	0.55	vehicle
accused	4	0.44	accused
delivered	4	0.44	delivered
exchange	4	0.44	exchange
guilders	4	0.44	guilders
hidden	4	0.44	hidden
involved	4	0.44	involved, involving
just	4	0.44	just
plastic	4	0.44	plastic
taking	4	0.44	taking, takings
total	4	0.44	total, totalling
2002	3	0.33	2002
2011	3	0.33	2011
2012	3	0.33	2012

carrier	3	0.33	carrier
custom	3	0.33	custom, customs
driven	3	0.33	driven
dutch	3	0.33	dutch
envelopes	3	0.33	envelope, envelopes
equivalent	3	0.33	equivalent
euros	3	0.33	euros
heroin	3	0.33	heroin
inside	3	0.33	inside
journey	3	0.33	journey
large	3	0.33	large

Appendix XVIII

Word Count: Untraceability

Word	Count	Weighted Percentage (%)	Similar Words
cash	20	7.87	cash
withdrawn	15	5.91	withdrawn
money	9	3.54	money
withdrew	9	3.54	withdrew
account	9	3.54	account, accounts
withdrawals	7	2.76	withdraw, withdrawal, withdrawals
january	5	1.97	january
sum	4	1.57	sum, sums
bank	3	1.18	bank
count	3	1.18	count
day	3	1.18	day, days
made	3	1.18	made
subsequent	3	1.18	subsequent, subsequently
transfer	3	1.18	transfer, transfers
two	3	1.18	two
2008	2	0.79	2008
500	2	0.79	500
amounts	2	0.79	amounts
august	2	0.79	august
credited	2	0.79	credited
deposit	2	0.79	deposit
february	2	0.79	february
followed	2	0.79	followed, following
international	2	0.79	international
july	2	0.79	july
large	2	0.79	large
paid	2	0.79	paid
part	2	0.79	part
payment	2	0.79	payment
taken	2	0.79	taken
trusty	2	0.79	trusty
various	2	0.79	various
107	1	0.39	107
12th	1	0.39	12th
200	1	0.39	200
2002	1	0.39	2002
225	1	0.39	225
25th	1	0.39	25th
27th	1	0.39	27th

400	1	0.39	400
420	1	0.39	420
4th	1	0.39	4th
7th	1	0.39	7th
880	1	0.39	880
9th	1	0.39	9th
accomplished	1	0.39	accomplished
aid	1	0.39	aid
also	1	0.39	also
arrangements	1	0.39	arrangements
arrested	1	0.39	arrested

Word Count: Circumstances

Word	Count	Weighted Percentage (%)	Similar Words
police	53	1.46	police
money	50	1.37	money
officers	44	1.21	office, officer, officers
cash	30	0.82	cash
account	30	0.82	account, accounts
arrested	28	0.77	arrest, arrested, arrests
car	24	0.66	car, cars
laundering	23	0.63	launder, laundered, launderer, launderers, laundering
october	22	0.60	october
search	22	0.60	search, searched
home	21	0.58	home
stopped	21	0.58	stopped
called	20	0.55	call, called
bank	20	0.55	bank, banking
observed	20	0.55	observation, observations, observed, observing
address	18	0.49	address
one	18	0.49	one
two	18	0.49	two
business	17	0.47	business
notes	17	0.47	note, notes
september	17	0.47	september
man	16	0.44	man
number	16	0.44	number
accused	15	0.41	accused
february	15	0.41	february
london	15	0.41	london
road	15	0.41	road
used	14	0.38	use, used, using
vehicle	14	0.38	vehicle, vehicles
2011	13	0.36	2011
counts	13	0.36	count, counted, counting, counts
customs	13	0.36	custom, customer, customs
july	13	0.36	july

march	13	0.36	march
house	13	0.36	house, houses
involved	13	0.36	involved, involvement
2003	12	0.33	2003
purchase	12	0.33	purchase, purchased, purchaser, purchasers, purchasing
offences	12	0.33	offence, offences
sums	12	0.33	sum, sums
2005	11	0.30	2005
drugs	11	0.30	drug, drugs
november	11	0.30	november
operations	11	0.30	operated, operation, operations
organised	11	0.30	organisation, organise, organised, organisers
received	11	0.30	receive, received, receiving
collect	10	0.27	collect, collected, collecting, collection
exchange	10	0.27	exchange, exchanged, exchanges
executed	10	0.27	executed, execution, executive
also	10	0.27	also

Appendix XX

Word Count: Predicate Crime

Word	Count	Weighted Percentage (%)	Similar Words
money	97	3.80	money
drug	95	3.73	drug, drugs
proceeds	62	2.43	proceed, proceeds
laundering	49	1.92	launder, laundered, laundering
criminal	38	1.49	criminal, 'criminal, criminality, criminals
dealing	31	1.22	dealing
trafficking	27	1.06	trafficker, trafficking
account	26	1.02	account, accounted, accounting, accounts
fraud	26	1.02	fraud, frauds
case	24	0.94	case
judge	24	0.94	judge
counts	23	0.90	count, counts
sentence	18	0.71	sentence, sentenced, sentences, sentencing
bank	18	0.71	bank, banked, banking
property	18	0.71	properties, property, property'
offences	17	0.67	offence, offences
represented	17	0.67	represent, represented, representing, represents
activity	16	0.63	activities, activity
cash	16	0.63	cash
conspiracy	16	0.63	conspiracies, conspiracy
involved	16	0.63	involved, involvement, involving
evidence	15	0.59	evidence
prosecution	15	0.59	prosecution
two	15	0.59	two
used	15	0.59	use, used, using
sums	15	0.59	sum, sums
conduct	14	0.55	conduct, conducted

supplying	13	0.51	supplied, supplies, supply, supplying
cannabis	12	0.47	cannabis
crime	12	0.47	crime, crimes
large	12	0.47	large
substantial	12	0.47	substantial, substantially
crown	11	0.43	crown
fact	11	0.43	fact, facts
made	11	0.43	made
related	11	0.43	related, relation
knew	10	0.39	knew
one	10	0.39	one
stolen	10	0.39	stolen
accepted	10	0.39	accept, accepted
operations	10	0.39	operated, operating, operation, operations
period	10	0.39	period, periods
amount	9	0.35	amount, amounted, amounting, amounts
basis	9	0.35	basis
guilty	9	0.35	guilty
transfer	9	0.35	transfer, transferred
years	9	0.35	year, years, years'
came	8	0.31	came
convicted	8	0.31	convicted, conviction
least	8	0.31	least