

# Behind the Criminal Economy: using UK tax fraud investigations to understand money laundering myths and models

Rian Matanky-Becker<sup>1,2</sup> and Ella Cockbain<sup>2</sup>

<sup>1</sup> Her Majesty's Revenue and Customs, Fraud Investigation Service, London, UK

<sup>2</sup> Department of Security and Crime Science, University College London, London, UK

## Abstract

To launder money is, by definition, to obfuscate and to hide, which makes it a notoriously difficult topic to study. Data access is another challenge contributing to the underdeveloped base. This paper presents an in-depth exploratory analysis of previously untapped data from the UK's tax enforcement agency. We examine a sample of money laundering investigations (n=31) over a three-year period, together involving 52 suspects. Against these cases, we test the applicability of the most widely used international model of money laundering: the three-stage model of placement, layering and integration (FATF, 2019). We also examine who was responsible for the offences and which laundering methods they used. A focus group with professionals helped us explore possible interpretations and implications of our findings. Overall, the results undermine the utility and validity of the ubiquitous three-stage model: it applied in under a third of cases. Cash couriers featured heavily and thus merit further attention, as do the cost-benefit decisions behind choosing between different money laundering methods. This study has relevance for academics, law enforcement, policy-makers and industry professionals alike.

## Key Words

Money laundering, financial crime, organised crime, tax evasion

## 1. Introduction

Money laundering is an important issue for governmental and intergovernmental agencies, law enforcement and industry. It not only has purportedly devastating effects on national economies ‘distorting consumption, savings, investment, inflation, competition, trade and employment’ (Ferwerda, 2013, p.35), but is increasingly perceived as an offender’s ‘Achilles heel’ which, if disrupted, would reduce serious and organised crime overall (FATF, 2019). Since the September 11<sup>th</sup> terrorist attacks, money laundering has also been increasingly conceptualised as linked with terrorist financing, and consequently counter-money laundering efforts have become a matter of national security (Unger, 2013).

Interest in money laundering has therefore increased at national and transnational levels, illustrated by the proliferation of international collaborative efforts aimed at tackling it. For example, The Egmont Group of Financial Intelligence Units – set up to support the exchange of financial information to identify money laundering – grew by over 100 member countries in the eighteen years between 1995 and 2013 (Unger, 2013). In the UK, the intensified strategic focus was reflected in the publication of the first *UK national risk assessment of money laundering and terrorist financing* (Home Office and HM Treasury, 2015), the launch of a new *Action Plan for anti-money laundering and counter-terrorist finance* (Home Office and HM Treasury, 2016), the formation of the National Economic Crime Centre (NCA, 2018), the announcement of a new Economic Crime Task Force (Gov.uk, 2019) and the publication of a comprehensive Economic Crime Plan (HM Government and UK Finance, 2019).

This increased strategic focus has also been accompanied by tangible, albeit so far modest, resource increases; including a 60% (80 to 127 FTE) increase in full time staff at the UK’s Financial Intelligence Unit between 2018 and 2020 with recruitment of a further 180 FTE planned (HM Treasury 2020a). Further, more significant, increases in the numbers of money laundering investigators are also on the horizon, with £63m announced at Spending Review 2020 to tackle economic crime, including supporting the National Economic Crime Centre (HM Treasury 2020b), as well as funding granted as part of Budget 2021 for HMRC to recruit c.400 “additional compliance staff to increase its [HMRC’s] ability to target non-compliance through illicit financial flows” (HM Treasury 2021, p55); and a consultation initiated regarding an Economic Crime Levy which, if implemented, would pay for further additional financial investigators (HM Treasury, 2020a).

Yet, academics have questioned the validity of claims about both the *devastating* effects of money laundering and the *significant* benefits of enforcement action, pointing to a stark lack of empirical evidence (Ferwerda, 2013; Levi and Reuter, 2006). As the UK continues to intensify its anti-money laundering efforts, it is vital that interventions are based on sound frameworks and rigorous empirical analysis.

Capitalising on unique access to case material, we analysed the process and actors across 31 money laundering investigations conducted by Her Majesty's Revenue and Customs' (HMRC) Fraud Investigation Service, one of the agencies at the forefront of the UK's efforts to investigate money laundering. Through in-depth exploratory analysis, we added additional empirical evidence to unresolved questions, interrogated commonly held assumptions, identified avenues for further research and suggested potential improvements to policy and practice.

## 2. Background: Money Laundering Definitions and Debates

The UK's legal definition of money laundering is set out in Part 7 of the Proceeds of Crime Act 2002 (POCA). According to POCA, a person commits an offence if: they conceal, disguise, convert, transfer or remove criminal property (POCA, 2002), where criminal property is defined as a person's benefit from criminal conduct; or if they enter into an arrangement 'which they know or suspects facilitates (by whatever means) the acquisition, retention, use or control of criminal property by or on behalf of another person'; or if they acquire, use or possess the proceeds of crime.

Outside the courtroom, however, there are at least eighteen different definitions of money laundering (Unger, 2006). One of the most influential definitions, given the organisation's role in setting and maintaining international money laundering standards, is that used by the Financial Action Task Force (FATF, 1990). FATF (2019) defines money laundering as 'the processing of... criminal proceeds to disguise their illegal origin'. This definition is commonly used in academic research into money laundering (Levi and Reuter, 2006; van Duyne, 2003; Geremelova, 2011).

FATF (2019) underpins this definition with a three-stage model of money laundering – comprising placement (criminal proceeds enter the financial system), layering (distance is put between the profits and the predicate offence) and integration (the proceeds re-enter the

legitimate economy). Whilst bearing little relationship to the legal definition explored above, this model strongly influences money laundering training material across various nations' law enforcement and private industry (van Koningsveld, 2013; Cassella, 2018). Despite – or perhaps because of – this dominance, the model has not been updated since it was first developed by the US Drug Enforcement Administration in the 1980s (van Koningsveld, 2013). This has led some, such as van Koningsveld (2013), to suggest that the three-stage model is limited, outdated and, as a result, potentially dangerous as practitioners who misunderstand money laundering are less likely to prevent or investigate it effectively.

Van Koningsveld's (2013) critique appears consistent with earlier empirical analysis conducted by van Duyne (2003). Van Duyne (2003) reviewed 52 Dutch cases against the categories of the three-stage model and concluded that 'analysis of criminal financial management in terms of the FATF categorisation [did] not appear to provide much insight', as there were no cases where 'layering' was present and fourteen cases where none of the stages were present (p.81). Indeed, Levi and Reuter (2006) argue that the three-stage model will remain too difficult for academics to operationalise in research given its weak conceptual foundations and vague definitions.

Van Duyne instead proposed the idea of 'criminal money management' (van Duyne, 2013, p.233). This concept is broader than FATF's definition of money laundering as it considers the full range of objectives criminals may have for their money, such as spending, saving, enjoying and investing (Benson, 2016). Proponents of the concept of criminal money management also suggest that money laundering, whatever its objective, must be understood in context and that it cannot be abstracted from the situations in which it occurs and the social relationships in which it is embedded (Benson, 2016; van Duyne, 2007).

## 2.1. Who and how?

In contrast to the abundance of definitions of money laundering, there are few empirical explorations of this crime. Looking across the literature, some of the most fundamental questions as to who gets involved in money laundering and how it occurs remain contested, and there appears a particularly pronounced divergence of views between two schools of thought: 1) that money laundering is complex and 2) that money laundering is simple.

Firstly, who perpetrates money laundering is contested. FATF encourages law enforcement to investigate 'professional money launderers': specialist experts providing money laundering services for a fee (FATF, 2018). The UK's National Crime Agency has an interest in

‘professional enablers’: those working in professions such as law or accountancy, who may facilitate money laundering knowingly or not (NCA, 2014). On the other hand, studies have found that the most common actor in money laundering is the individual who committed the predicate offence, and that professional enablers are rare (Levi and Reuter, 2006). Indeed, van Duyne (2003) found that across 52 high-value criminal cases (where criminal assets were assessed to be over €450,000) involving a range of crime types and 139 suspects, only two cases featured hired professionals.

Similarly, FATF (2019) describe how criminal funds move across the globe, including through offshore financial centres. The ‘transnational’ view (Peinhardt and Sandler, 2015), however, stands in contrast to empirical findings that have concluded that money laundering is far more likely to occur in its entirety within a single country (Hetzl, 2018). As for how the money gets to its destination, FATF devotes significant resources to identifying multiple sophisticated typologies (FATF, 2005). Other law enforcement organisations, in contrast, have argued that cash movements – one of the simplest forms of money laundering – ‘remain king’ (Europol, 2015, p1). This assessment is consistent with van Duyne’s (2003) research, in which he concluded that cash export was the most common form of laundering and that criminals generally use pragmatic and unsophisticated approaches.

The range of divergent conclusions could be because money laundering is genuinely varied and features notably diverse forms, participants and settings (Levi and Reuter, 2006). Alternatively, the inconsistent conclusions could result from the fact that studies of money laundering have taken place across numerous geographical and temporal contexts using highly varied methods, from the examination of Dutch case files from twenty years ago (van Duyne, 2003) to more recent offender interviews in Germany, Liechtenstein and Switzerland (Teichmann, 2020), with little replication or comparative analysis. This difficulty in distinguishing between genuine variability and inconsistency or incomparability in methods and contexts is exacerbated by the definitional disagreement explored above, which may have meant that scholars studied essentially different phenomena under the same loose umbrella term of money laundering (Levi and Reuter, 2006).

Amid this context, our study was designed to apply some of the methods of analysis previously conducted in the Netherlands in 2003 to more recent UK cases, to establish whether there was any cross-contextual applicability of the findings of researchers such as van Duyne. We also had the opportunity to bridge the gap between practitioners and academics, through the first

author's position as both researcher and senior HMRC staff. While her insider position presented some specific risks of bias (Holgerson, 2015), it also provided important contextual knowledge and experience, facilitating access to hard-to-reach data and participants.

We sought to expand the limited empirical evidence base on money laundering by assessing whether and to what extent dominant conceptions of money laundering applied to cases investigated by HMRC's Fraud Investigation Service. In doing so, we sought to unpick assumptions that are embedded into research and practical training manuals. With respect to our sample, we addressed three interlinked research questions:

1. To what extent do the behaviours covered in case material support the three-stage model of money laundering?
2. Who is involved in investigated cases of money laundering?
3. What methods did these suspects use to launder money?

We selected HMRC's Fraud Investigation partially for pragmatic reasons: at the time of the research, the first author was Chief of Staff at the Fraud Investigation Service, which helped her gain privileged access to the data. There were also other important reasons for focusing on HMRC as, despite being one of the UK's largest law enforcement agencies, the data it holds has attracted little study and it plays an important but relatively poorly understood role in anti-money laundering in the UK. HMRC is both a supervisor as set out by the Money Laundering Regulations (2017), tasked with supporting businesses to protect themselves from money laundering, and an enforcement agency that has charged hundreds of individuals with money laundering offences (York, 2018). Whilst HMRC is primarily interested in money laundering cases where the predicate offence is a tax crime or there has been a regulatory breach in a sector they supervise, this manifests as a broad range of predicate crime types, from 'white-collar' financial crime through to commodity-based (illicit alcohol and tobacco smuggling) organised criminality (York, 2018). HMRC also works closely with the National Crime Agency and other law enforcement partners to use its intelligence and expertise in tackling financial crime to advance the UK's wider counter organised crime and terrorist financing priorities (York, 2018).

Throughout this article, we use the term money-laundering as set out in Part 7 of the Proceeds of Crime Act 2002 as that is the definition relied upon by the case officers producing the case material under consideration alongside the FATF (2019) definition of money laundering – 'the processing of criminal proceeds to disguise their illegal origin' – since this definition is

recognised both within academia and HMRC. We also use the concept of criminal money management (van Duyne, 2013) to help contextualise money laundering within its temporal, environmental and social setting.

### 3. Methods

#### 3.1. Materials

We received permission from the Director of HMRC's Fraud Investigation Service to access both the organisation's management information system, in which metadata for all investigations was recorded, and to request individual case files for investigations identified through this system. The ethical implications of using this data were considered, for information see Appendix I.

The management information contained metadata (see Table 1) for each case, including a mix of objective information, such as the date of arrest, and subjective assessment, such as the complexity of the investigation or the duration of the offence. The metadata was complete for every case, however there were certain categories where the way in which it had been completed raised questions. For example, predicate offence was completed as 'none' in 68% of cases. Money laundering typically requires a predicate offence to generate the proceeds, so 'none' was taken as unknown rather than that there had genuinely been no predicate offence.

Similarly, estimated fraud length was completed as '0 months' in 81% of cases and it was not clear whether that was an informed estimate of the fraud's duration, or a marker for the fact the length was unknown. The metadata were entered into the management information system by the case officer and overseen by the case's senior investigating officer. Certain data categories such as estimated revenue loss prevention were also independently assured by the data oversight team.

**Table 1** Metadata contained in HMRC’s management information

<b>Category</b>	<b>Detail</b>
<b>Predicate Offence</b>	The crime known to have generated the money subsequently suspected of being laundered
<b>Case Category</b>	Whether the case was considered by the case officer to have been committed by an organised criminal, or by another type of suspect
<b>Complexity Rating</b>	Assigned to each case by the Crown Prosecution Service and scored either low, medium or high
<b>Date of Arrest</b>	Recorded as DD/MM/YYYY
<b>Revenue Loss Prevented</b>	This measure is how HMRC values its compliance activity and is an estimation by the case officer – albeit using a standard organisationally approved methodology and assured by the central data oversight team – of the amount of tax that would have been lost had the criminal activity not been stopped (HMRC, 2017). Although it is an estimation with some methodological weaknesses – in that it does not account for a displacement effect, nor for rival criminal gangs taking over market share – the National Audit Office assessed it to have ‘reasonable’ validity (NAO, 2016, p.32)
<b>Value of cash seizures</b>	The total amount of money seized throughout the course of the investigation
<b>Estimated duration of offence</b>	This was assessed by the case officer and provided in months

In addition to the metadata, we requested the MG3 form for each case: a case summary document prepared by the investigator for the prosecutor to influence the decision as to what charges, if any, should be brought.

### 3.2. Sampling

Using the management information system, we identified all cases that had gone to trial between April 2016 and March 2019 where money laundering was the primary focus of the investigation. Cases which had gone to trial were selected both because these were the cases where the information was the most complete and because the evidence within these cases had necessarily already been independently assessed by a prosecutor as being of high enough quality to give a realistic prospect of conviction. Three years’ worth of data were used to



increase the sample size and reduce the risk of bias associated with exceptional activity in a given year. Money laundering regulation offences (offences associated with failing to comply with anti-money laundering regulations, rather than with committing money laundering itself) were not included, nor were cases where money laundering was the secondary focus, as these cases were not identified consistently within HMRC's management information.

We worked with a convenience sample of this population of 59 cases, as we requested the MG3 forms for each and received 31 case summaries in response (either MG3 or other forms). The drop-off rate was primarily due to the case officers not responding or the requested material having already been archived.

### 3.3. Risk of Bias

There were limitations to this study associated with the data used; law enforcement data is socially constructed and reflects an organisation's priorities, capacity, funding and awareness rather than simply mirroring offending behaviour (Cockbain, Bowers and Vernon, 2018; Maxfield and Babbie, 2011). There were additional limitations associated with our specific research design, including the fact that we only looked at closed cases, which means that our sample may not have been representative of more complex cases still under investigation nor of the methods used by 'successful' offenders who managed to avoid detection in the first place (Teichmann, 2020).

The convenience sampling used was pragmatic (we sought but were unable to access files from the full population of cases) but contains inherent risk of non-response bias if there were systematic differences between those files we could and could not access. As we had metadata for the whole population of 59 cases, we were able to test the representativeness of our case sample (n=31) against these characteristics at least. Table 2 shows the results of this analysis:

**Table 2** Comparison between population and sample characteristics

<b>Category</b>	<b>Population statistic</b>	<b>Sample statistic</b>	<b>p-value</b>
Proportion of cases in which the suspect is considered by HMRC to be an organised criminal	0.41	0.45	$p > 0.05$
Proportion of cases considered by the CPS to be low complexity	0.34	0.32	$p > 0.05$
Mean revenue loss prevented (£)	3,238,211	2,065,909	$p < 0.01$
Mean value of cash seized (£)	168,551	204,634	$p > 0.05$
Mean estimated duration of money laundering (months)	2.9	2.3	$p > 0.05$

Against most categories there was no significant difference between the population statistic and the sample statistic at a level of 95% confidence ( $p > 0.05$ ), meaning that in many respects the sample was likely to be representative of the HMRC population. The mean ‘revenue loss prevented’ was, however, significantly lower in the sample than the population (at  $p < 0.01$ ), meaning that our results may not hold for higher value HMRC cases. Moreover, as with any research focusing on investigated cases only, it is not possible to make generalisations from the sample to money laundering at large.

Due to the sensitive nature of the data and the access restrictions imposed by HMRC the data could not be double-coded, thus increasing the risk of possible coding bias (Cockbain, Bowers and Vernon, 2018).

Clustering in the suspect sample also increased the risk of bias: in some instances, there were multiple suspects per case and these individuals could therefore not be considered to be independent. Characteristics of suspects involved in multi-suspect cases may skew the overall sample results. To address this possible bias, we specifically considered the impact of clustering and drew out in our results where it had an impact.

Another limitation of our suspect-level data was that the available material did not detail how many of the suspects referred to be charged were eventually convicted. Our suspect sample was also relatively small ( $n=52$ ), potentially meaning that certain important differences were non-significant in the inferential tests. For certain data categories, there was also missing data.

In particular, criminal histories had a 35% completion rate. Where missing data was an issue, we urge caution against extrapolating from patterns identified for a subset of the sample to the sample at large.

### 3.4. Analysis

This study primarily used quantitative content analysis of the 31 money laundering cases, involving 52 suspects. This approach was augmented using focus groups and the exploration of a selection of case studies included to add nuance and qualitative depth.

To supplement the existing metadata for each case, we developed a coding framework against which to analyse the additional information contained within the case summary and MG3 forms. We developed our coding framework iteratively, informed by our research aims and questions, and adjusted based on initial readings of casefiles. Table 3 summarises the coding template.

**Table 3** Overview of coding framework used

<b>Category</b>	<b>Detail</b>
Money laundering stages  (FATF, 2019; van Duyne 2003, van Koningsveld, 2013)	Recorded whether the case material contained evidence of: <ul style="list-style-type: none"> <li>• Placement: money entering the financial system e.g. cash deposits</li> <li>• Layering: money transferred between multiple accounts/people for no legitimate purpose</li> <li>• Consolidation: money from different sources being brought together into a single place or account</li> <li>• Justification: transactions/activities taking place that provided a cover story to the transactions e.g. false paperwork</li> <li>• Integration: money being spent in the legitimate economy e.g. purchase of properties</li> </ul>
Transnational	Recorded whether case material contained evidence of: <ul style="list-style-type: none"> <li>• Money moving overseas e.g. use of Currency Exchange Services, wire transfers to international accounts or physical cash exports</li> </ul>
Money laundering methods	Recorded whether case material contained evidence of: <ul style="list-style-type: none"> <li>• Wire transfers, the electronic transfer of funds typically from one bank account to another.</li> </ul>

(Hetzl 2018; Home office and HM Treasury, 2016; van Duyn 2003)

- Third party bank accounts, making use of bank accounts held in another person's name where that person is not connected to the offence
- Front company/organisation, making use of company structures to obscure illicit activity. These can be used in a variety of ways for example as a cover for transport activities, to enhance anonymity by holding assets in complex company structures, and to make money movements appear legitimate.
- Purchasing high-value goods, liquid assets such as cash are used to purchase high value goods including property, jewellery/precious metals, and vehicles. Value is stored in these assets which can be sold at a later date.
- Currency exchange bureaus, used to exchange cash from one currency to another, for example into a currency with higher denomination bills. Many such bureaus also offer other services vulnerable to money laundering such as cash remittance which allows money to be sent from one party to another (often internationally without either needing a bank account).
- False invoices/receipts, the falsification of documents which give the appearance of legitimate trade having taken place.
- Deposits, cash is deposited so that it enters into the electronic banking system. Large cash amounts may be broken into smaller amounts and deposited at multiple locations.
- Cash withdrawal, cash is withdrawn from the electronic banking system.
- Cash Possession, an individual is in possession of large quantities of cash which they are either concealing or moving from one location to another.
- Cash Handover, This may also involve cash handovers where the cash physically changes ownership from one person to another.
- Export, cash is concealed and physically moved abroad.
- Ownership disguise, assets are held in such a way that distance is put between them and their true owner, for example property held in the name of a third party.
- Loan back, criminals can lend money in cash, for example to a Not for Profit organisation, who then pay the money back through more legitimate seeming bank transfers, or criminals can receive funds which the payer describes and constructs as a

	<p>loan but where there is no actual expectation that the funds will be paid back.</p> <ul style="list-style-type: none"> <li>• Payroll, funds are transferred to criminal associates but are made to appear as if the associate is an employee and the funds transfer a salary.</li> <li>• Speculation, the use of gambling products and services to store and move the proceeds of crime, peer to peer gambling and to mask the source of funds.</li> <li>• Bookkeeping, creation of false accounts which give the appearance of legitimate trade having taken place.</li> </ul>
Who	<p>Recorded whether or not case material contained evidence of:</p> <ul style="list-style-type: none"> <li>• Self-laundering: the same individual being involved in the predicate as well as the money laundering offence</li> <li>• Professional enabler involvement such as lawyers or accountants (regardless of whether they were themselves a suspect in the case)</li> <li>• Professional money launderer involvement: an individual being paid for the part they played in the laundering process</li> </ul> <p>Where known, we also recorded data on suspect's gender, date of birth, profession and whether or not they had a criminal history.</p>

The first author reviewed the files in full onsite at HMRC, extracting relevant data to complete the coding framework in Excel. We then used descriptive statistics to detail the presence, or not, of the different stages of the three-stage model of money laundering, to examine suspect characteristics such as age, gender and previous criminal history, and to identify common money laundering methods. We then conducted correlation analysis to investigate whether there was a relationship between the diversity of suspect behaviour (measured through the number of different money laundering methods used) and the scale of money laundering undertaken (measured through revenue loss prevented), or the amount of cash seized by law enforcement.

In assessing the three-stage model and money laundering methods, the primary unit of analysis was the case, by which we mean the totality of criminal activity evidenced within each set of case papers provided. Whereas for the offender characteristics the unit of analysis was the suspect. We defined suspect as an individual who had been referred to the Crown Prosecution Service for charging.

Throughout our analysis, we also drew out anonymised case studies to illustrate overall patterns and add depth, or to highlight ways in which certain cases diverged from the overall norms. We also include some direct quotes from the material and other qualitative examples.

#### 3.4.1. Focus Groups

We ran a focus group, made up of six frontline investigators and policy experts (three investigators and three strategy/policy leads) to discuss our results, which helped to contextualise and inform our interpretation of the findings and their implications. We asked whether the findings were reflective of the participants' own experiences of HMRC money laundering investigations, what explanations they could think of for trends or surprising results and what the implications might be for practice and/or policy. We recruited participants using personal and professional connections within the Fraud Investigation Service. We made sure that the group involved both men (n=2) and women (n=4) and reflected a range of levels of experience, from 11 months through to 20 years. The focus group lasted approximately an hour and a half and took place face-to-face in a private room at HMRC.

## 4. Results

In this section, we look at the evidence for the three-stage model of money laundering, who is involved in money laundering and what methods they use.

### 4.1. To what extent do the behaviours covered in case material support the three-stage model of money laundering?

Across all 31 cases, only one had evidence of all three stages supposedly central to money laundering: placement, layering and integration. Meanwhile, 21 sets of case papers (71%) contained no evidence of *any* of these three stages. The following case studies illustrate what the cases with and without the three stages looked like:

**Case One:** The suspect was the director of more than 10 companies and had between 50 and 150 bank accounts. He paid money into his accounts (placement) before transferring it between the various companies he controlled to simulate legitimate trade (layering) and then withdrawing the proceeds as cash. One method of withdrawal was cashing cheques at a local pub. He had a network of criminal associates, some of whom were paid 'wages'; the part-time bookkeeper employed at one of the suspect's

companies created false employment documents. The bookkeeper also created a false contract of employment for the suspect's son to support him falsely obtaining a mortgage. The suspect purchased multiple properties but placed these in the names of his wife and son (integration). This laundering was known to be linked to the evasion of value added tax (VAT)<sup>1</sup>, income and corporation tax; the estimated revenue loss prevented was £900,000.

**Case Two:** The suspect was approached by investigators who asked to search his car, thereupon finding over £100,000 in cash. At interview the suspect failed to provide an explanation for the cash, answering 'no comment' to all questions, and no record of legitimate employment could be found. No predicate offence was recorded in the case material; the estimated revenue loss prevented was £130,000.

Where case papers contained evidence that one or more of the stages of money laundering had occurred, the most common was placement. Yet, even placement was documented in only 19% of cases (see Table 4):

**Table 4** Frequency of evidence of placement, layering and integration

<b>Stage</b>	<b>Frequency</b>	<b>% of cases</b>
<b>Placement</b>	6	19
<b>Layering</b>	4	13
<b>Integration</b>	4	13

#### 4.2. Who is involved in money laundering?

Across the 31 cases in our sample there were 52 identified suspects, 82% (n=43) of whom were male. As seen in Table 5, most cases (61%) involved only one suspect, and 87% of cases involved two or fewer suspects.

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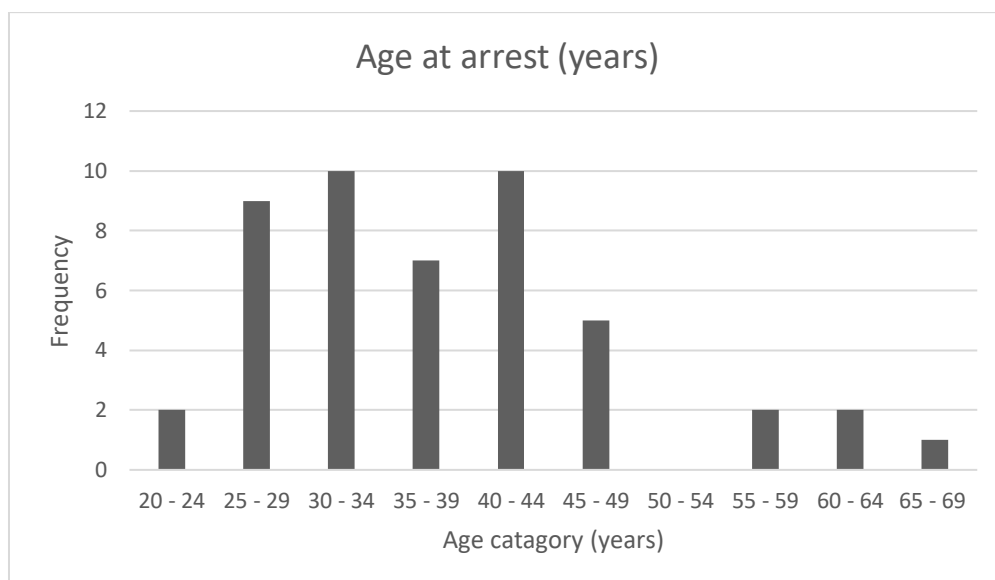
<sup>1</sup> Known in some countries as a Goods and Services Tax (GST)

**Table 5** Number of suspects per case

<b>Number of offenders per case</b>	<b>Frequency</b>
<b>1</b>	19
<b>2</b>	8
<b>3</b>	2
<b>4</b>	0
<b>5</b>	1
<b>6</b>	1

Although 61% (n=19) of suspects in the sample appeared to be acting alone, there was a strong gendered dimension: 42% (n=18) of the men were charged alone, whereas eight of the nine women were charged alongside other people, to whom they were often linked by close ties such as being siblings, partners or spouses. The one woman charged alone was an employee at a Money Service Business who sent money abroad at the behest of people who she knew to be criminals.

Where date of birth was documented (92%, n=48), suspects ranged in age from 24 to 68 years (see Figure 1), with a median of 38 years (IQR: 30-44). Women were on average younger, with a mean age of 31 years compared to 40 years for men.



**Fig 1** Age at arrest in years



We had occupation data for 87% (n=45) of suspects. Within this sub-sample, the most commonly occurring occupations, each featuring 22% (n=10) of the suspects, were unemployment, transportation (Heavy Goods Vehicle (HGV) drivers, taxi drivers or couriers) and company directors (in either the construction or alcohol wholesale industries). The extent to which these director's companies were simply fronts for money laundering versus how much genuine trade any of them did was unclear. The two largest cases accounted for eight of the ten company directors, which could skew the results when considering overall prevalence. Of the remaining 15 suspects with a known occupation, one was a podiatrist, whilst the others worked across a range of trade, administrative and service occupations.

The case material provided limited information as to why these individuals became involved in money laundering alongside their legitimate occupations, although in five cases at least one of the suspects admitted to receiving payment. Case studies show two particular financial motivations; suspects either reported struggling to make ends meet and/or were offered a material incentive they could not normally afford. A series of text messages recovered from one suspect's phone, for example, read 'What I have resorted to to get some food as have no work', accompanied by a picture of bundles of £20 notes and a text saying 'CRIME, gun emoji, knife emoji, 3x crying face emoji'. In another case, a suspect described how he had been working in a shop when he was given £2000 to buy a new car in exchange for couriering cash and said that he had been promised that there was 'no drugs and nothing illegal' and he 'took his word for it'.

Despite being a key interest for law enforcement, so-called professional enablers were rare in this sample: only two of the suspects (one each across two cases) brought in additional financial expertise. One employed a part-time bookkeeper who he asked to falsify employment records to justify illicit money movements. The other used a company formation agent who specialised in setting up offshore companies and accounts to hide his money overseas.

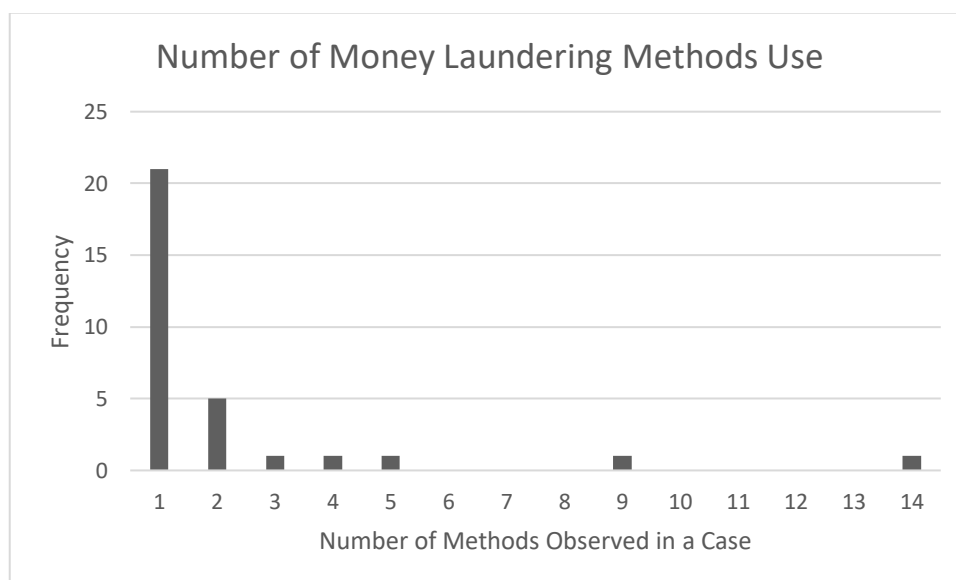
There was limited available information on prior criminal records. Where known (n=18, 35%), only half had an existing criminal record in the UK. These records included a variety of crimes, such as disorderly conduct, traffic offences, witness intimidation, actual bodily harm. Notably, at least two suspects had previously been convicted of possession of criminal proceeds. In only four cases was it made clear anywhere in the case file that the suspects involved in the money laundering had also been involved in the predicate offence.

### 4.3. What methods are used to launder money?

In 62% of cases (n=21), there was no indication that the suspected money laundering spanned countries other than the UK. Of the ten cases where there were overseas links; however, six were cases where lorry drivers carrying large quantities of cash were stopped at the outbound controls of ports such as Dover. Of the four remaining cases where there was an international element:<sup>2</sup>

- One case involved multiple Eurotunnel trips by the suspects, the purpose of which was unclear.
- Two involved international accounts and companies that received electronic transfers of money, including companies registered in Abu Dhabi, Cayman Islands, Poland and Hong Kong.
- Two involved money service businesses, which transferred money overseas.

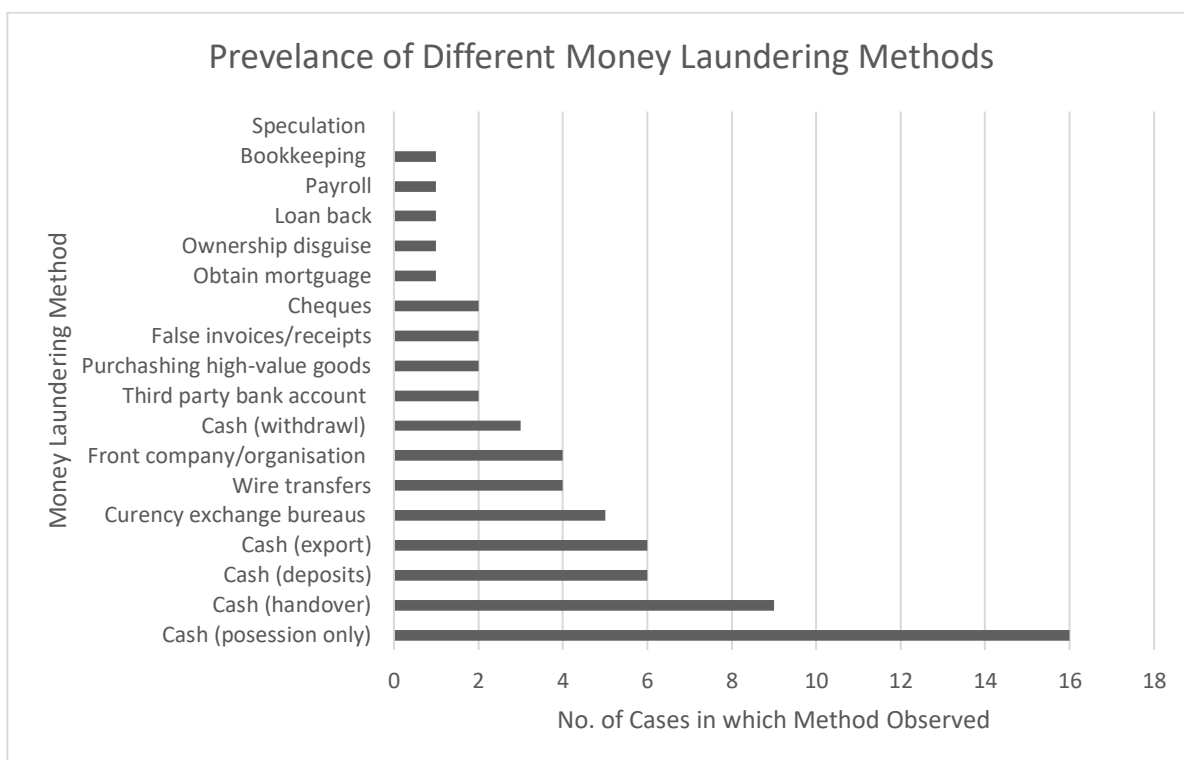
Another notable feature of our sample was that it was dominated by relatively simple cases. Figure 2 shows that in 71% (n=22) of cases there was evidence of only one money laundering method being used. There were, however, also a couple of complex outliers, which involved intricate nexuses of front companies, land purchases, international transactions and false accounting.



**Fig 2** Number of money laundering methods used

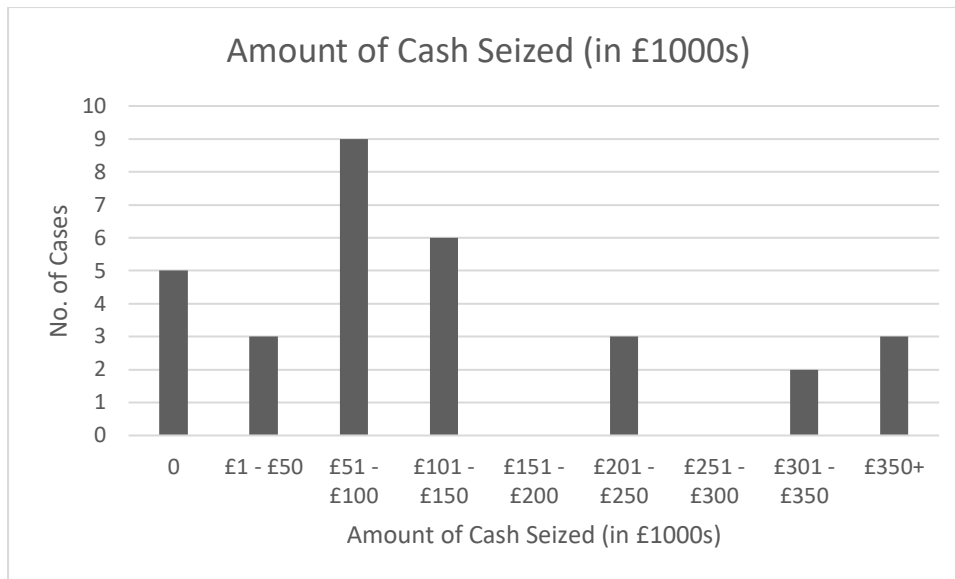
<sup>2</sup> Does not sum to four as a single case could have more than one international element.

The most common method, as seen in Figure 3, was simply possessing a large quantity of cash (52%, n=16). The next most commonly documented methods also featured cash and were cash handovers (where large sums of cash physically changed ownership) in 29% of cases (n=9); cash export (where suspects attempted to take cash out of the country, often via lorry/van at the port of Dover) in 19% of cases (n=6); and cash deposit (where suspects paid large amounts of cash into banks) also in 19% of cases.



**Fig 3** Prevalence of different money laundering methods

There were only five cases in which no cash was seized as part of the investigation. While the median amount seized was £100,000 (IQR: 50,000 - 220,000), it ranged greatly from a low of £1,500 to a high of £1,600,000. Figure 4 provides more detail.



**Fig 4** Amount of cash seized

Upon examination, we found correlation of  $r=0.4$  ( $p < 0.05$ ), between the number of money laundering methods used and the estimated revenue loss prevented. Meaning that cases involving higher estimated revenue loss prevented also tended to feature more diverse methods of money laundering. We found, however, no such significant relationship between the amount of cash seized and the diversity of money laundering methods employed ( $r = -0.1$ ,  $p > 0.05$ ).

## 5. Discussion

In this section, we discuss the implications of our findings to both theory and practice and indicate potential areas of further research.

### 5.1. The three-stage model

Given the dominance of the three-stage model of money laundering in informing international standard setting (FATF, 2019), practitioner training (van Koningsveld, 2013; Cassella, 2018) and academic research (Geremelova, 2011), it was striking how few of the HMRC case summaries analysed provided any support for it. In 71% of the cases we reviewed, none of these three supposedly fundamental stages of money laundering were documented - although it should be emphasised that a lack of evidence for them is not the same as proving their absence. To an extent, this absence might reflect our use of MG3 forms (case summaries) as opposed to the full set of investigative case files. Our focus group pointed out that in those

forms an investigator is making use of the legal definition of money laundering and is only required to document specific ‘points to prove’ as set out in the legislation (POCA, 2002), and therefore it is possible that they may omit certain details of the case relevant to the three-stage model but not to the legal requirements. It is also possible that, albeit unprovable, that in these instances where few of the money laundering stages were documented that there were additional stages that had happened, but which investigators had not detected, and/or which were going to happen, but which investigators had disrupted.

It is, however, unlikely that the limited evidence for the three-stage model is wholly accounted for by the nature of the data we used, as a comparable but more detailed study by van Duyne (2003) also concluded that the model was of limited descriptive value. As a result of van Duyne’s access to a much greater depth of case materials, he found the absence of all three stages in 27% of cases as compared to our 71%; nevertheless, in more than a quarter of cases he found no evidence for the most dominant international description of money laundering.

An argument put forward for the lack of empirical evidence for the three-stage model is that it is out of date; van Koningsveld (2013) has pointed out that the model has not been updated since it was developed by the US Drug Enforcement Administration in the 1980s despite rapid technological and societal changes during this period. This was an argument supported by our focus group, who suggested that given today’s technology, there are now many more ways of entering money into the financial system, using banks, PayPal, cryptocurrencies and pre-paid cards. This means that the very act of putting money into the system (placement) could also be a method of creating distance from the predicate offence (layering) and that the different stages, therefore, may now be less distinct than they once were. Although this is an interesting argument, digital or cryptocurrencies did not feature prominently in our sample; even if they did, a blurring of the stages would still not explain their apparent absence in 71% of cases.

The most compelling explanation for the inadequacy of the three-stage model in our study, beyond the limitations of the dataset, was the fact that many instances of money laundering were very simple. As drawn out in our case studies, having a bag of cash in the boot of a car and setting up front companies associated with webs of international bank accounts, were both considered examples of money laundering, although the actions involved in each instance of money laundering were vastly different. The discrepancy between the complexity of the behaviours observed in this study supports the hypothesis outlined at the start of this paper that academics have indeed studied – and investigators investigated – essentially

fundamentally different phenomena under the same loose umbrella term of money laundering (Levi and Reuter, 2006). The result of failing to account for this diversity is that the three-stage model lays false claims to universality, whereas at best it is highly partial, applying far less well to simple instances of money laundering than to their more complex equivalents.

The polarity of cases seen in this study indicates that it may be worthwhile to distinguish conceptually between, say, 'simple' and 'complex' laundering, and that different models or definitions of money laundering may be more applicable to different types. For example, whilst the three-stage model does not appear appropriate to 'simple' laundering, alternate models such as the 'raising, moving, storing, using' model used more recently by FATF and some UK law enforcement agencies (FATF and MENAFATF, 2015, p.33) could be further explored instead. Alternatively, rather than risk imposing a false binary, academics may wish to develop a more complete and nuanced set of crime scripts<sup>3</sup> for each of the different common methods of money laundering, in order to identify additional opportunities for intervention (Cornish 1994; Leclerc, 2017).

It is unclear from this or previous studies what the practical impact of over-reliance on a flawed three-stage model is; some, including van Koningsveld (2013), have argued that it is dangerous and highly problematic as practitioners who conceptualise money laundering inaccurately may be less likely to prevent or investigate it effectively. It would be interesting to test this hypothesis and to understand what role the three-stage model plays in investigative decision making, given its dominance in the training manuals they are taught from but absence from the law which they apply. In-depth interviews or surveys with investigators on this subject would likely be a worthwhile exercise. If academics and institutions such as FATF over rely on a model that is potentially inaccurate there is a risk that resources spent on research into money laundering could be used inefficiently and that our understanding of money laundering could stagnate.

## 5.2. Suspect characteristics

Overall, we found that for certain characteristics, such as gender, the characteristics of money launderers conformed to UK crime patterns; for others, such as age, there was significant divergence, indicating that there may be offending patterns specific to money laundering that it would be useful to understand. The 'who' of money laundering remains relatively under-

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<sup>3</sup> A crime script is a knowledge structure that organises the sequence of actions that an offender takes within a particular context. It illuminates the crime-commission process and provides insights into what offenders are thinking, assisting in understanding the rationale of offenders (Leclerc, 2017).

researched compared to the ‘what’, and as such these findings signpost many future avenues for fruitful further exploration.

The gender differences in offending behaviour observed in this study – featuring a predominance of men, with women in the sample overwhelmingly acting as accomplices for male suspects – are reminiscent of broader UK crime patterns, where the majority (76%) of individuals prosecuted are male (Ministry of Justice, 2018). It also echoes the findings of specific studies into patterns of female offending in crimes where men tend to act alone, such as sex offending, whereby female offenders typically act as the accomplices of male offenders (Lewis and Stanley, 2000).

The age of suspects in our study did not, however, conform to more general crime trends, as every suspect in this study was an adult at the age of arrest, with an average age of 38 years. This finding supports critiques of the ‘age-crime curve’ theory of offending – the theory that offending starts in adolescence, peaks in an individual’s early 20s, and then quickly tails off (Hirschi and Gottfredson, 1983) – which argue that the age-crime curve is far from universal and varies according to several factors, including crime type (Ulmer and Steffensmeier, 2014). Whilst there is little research into the criminal careers of money launderers specifically, studies into other crime types such as organised crime (Kleemans and van Koppen, 2020) and fraud (van Onna, 2018) have found a similar pattern of ‘adult-onset’ offending.

Kleemans and van Koppen (2020) argue that certain crime types lend themselves to adult onset offending because participation has a barrier to entry, such that only those individuals with certain social or professional connections will have the opportunity to engage and that those connections typically tend to be built in adulthood. One such professional connection explored specifically by Kleemans and van Koppen (2020) was employment in the transport and logistics industry. This provides an interesting parallel with this study as 22% of suspects with a known employment status worked in the transportation industry. This finding supports the theory that crime is a product of opportunity (Clarke and Felson, 1993) as it was through these suspects’ routine daily activities (their jobs) that they were provided access to potential methods of money laundering.

Similarly, van Koppen (2013) argues that owning a company can provide opportunities to legitimise criminal activity, provide logistical support for it and/or launder the proceeds. It was notable that in our study, the 22% of suspects who were company directors were clustered in the construction and alcohol wholesale industries. Whilst this could have been a product of

one large case skewing the data and/or an organisational bias within HMRC towards investigating these industries, the fact they commonly occur across studies of money laundering (Riccardi, Soriani and Giampetri, 2016) indicates that there could be something specific to the social opportunity structures of these industries that makes them particularly favourable for money launderers (Kleemans and van Koppen, 2020).

A particularly interesting finding, given the increasing focus on this offender group (FATF, 2018) was the near absence of professional enablers; only two cases featured financial professionals. A similar pattern was observed by van Duyne (2003), who found only two professional enablers in the 52 cases he examined. This finding could be a product of the limitations of both our and Van Duyne's studies; van Duyne's study is from 2003 only two years after the introduction of anti money laundering legislation in the Netherlands when financial policing efforts may have been less mature (Soudijn, 2014) and we only considered suspects who had been charged and it could be that professionals are better at avoiding detection. Soudijn (2014) suggests that studies which use police data may fail to accurately reflect the prevalence of professional enablers because such enablers are likely to present in higher value cases and because the investigative strategy of the organisation may mean that they are not identified. On the case value point our sample is too small to be conclusive; the average value of frauds in our sample was £2,065,909 and one professional enabler appeared in a case of above average value (£2,640,000), the other in one of below average value (£900,000). In terms of investigative strategy, on the one hand this critique is less likely to apply to HMRC because since 2017 it has a dedicated professional enabler strategy which has seen the investigation of enablers prioritised and the number of active investigations doubled (York, 2021). On the other hand, whilst all of the cases in our sample concluded in financial year 2016/17 or later, in 22 of them (71%) the investigation started before 2017 – albeit both cases that did feature enablers fall within this 71%.

Whilst the evidence on professional enablers is inconclusive, what is clear from the data is that in the majority of HMRC's money laundering cases the suspects were cash couriers. Whilst the preponderance of cash couriers does not provide evidence for 'professional enablers', in terms of financial or legal professionals involved in money laundering, it could be argued that it provides potential indirect support for the presence of 'professional money launderers' i.e. offenders who specialise in providing money laundering services (FATF, 2018). This is because for there to be cash couriers there must also have been individuals who identified, recruited and instructed these couriers. However, as these individuals are absent from the data,



it is unclear as to whether the cash couriers were actually recruited by true professionals or whether their involvement was opportunistic and became involved in laundering informally via friendship or kinship ties (Malm and Bichler, 2013).

Our research also suggested that the standard definition of a cash courier, as an individual who has been paid to transport money across international boundaries by concealing it on their person (FATF and MENAFATF, 2015), may be too narrow as we also identified cash couriers who transported money in vehicles as well as on their person and who moved money domestically, as well as overseas. Although only five suspects admitted receiving payment for cash couriering, our focus group thought that it was highly likely that most of the individuals apprehended were providing a paid-for cash couriering service. Indeed, the focus group suggested that our findings – that money launderers were typically middle-aged, some of whom had no previous criminal convictions and were gainfully employed in the licit economy – could be explained by the deliberate recruitment strategies of organised criminals whereby they used their extended social networks to identify potentially susceptible men, in certain occupations, with no criminal record.

The case material also offers important glimpses of individuals' motivation (e.g. to pay for food, to acquire a new car), which our focus group felt was reflective of their own understanding of cash couriers' financial motivations. Far from being sophisticated organised criminals, at least some of these individuals seemed driven by more modest and immediate material needs. This finding is supported by Soudijn and Reuter's (2016) examination of six investigations into Columbian drug cartels operating in the Netherlands, which involved 181 cash couriers. They found that cash couriers were motivated by 'a few thousand euros pocket money and a free ticket to South-America' (p.279), and concluded that recruiters had specific recruitment strategies, either approaching people they knew to be in financial difficulty or asking existing couriers to recommend family and friends.

Soudijn and Reuter's (2016) study is a rare exception however, as most money laundering research has focused on *how* money is laundered, with the reasons *why* individuals become involved a relatively understudied area. Future research into offender motivations could further explore HMRC cases involving couriers and could request access to more detailed case files, including interview transcripts; researchers could look to interview cash couriers or recruiters themselves as it is often necessary to understand a money launderer's exact steps in order to maximise prevention efforts (Tiechmann, 2020). In practice, for example, whenever

HMRC identifies a cash courier, it could also seek to identify the individual who recruited them into criminality, with the objective of prosecuting them and disrupting the recruitment networks.

### 5.3. Money laundering methods

In contrast to common perceptions of money laundering as a complex and transnational phenomenon (FATF, 2019; Peinhardt and Sandler, 2015), we found that most money laundering in our sample was simple, involving only one method, and primarily domestic. Another striking feature was that all the most common methods of money laundering in our sample were cash-related. The conclusion that money laundering tends to be domestic has also been reached by Hetzel (2018) and the notion that cash is a dominant feature of money laundering is also consistent with other research (Riccardi and Levi, 2018; Europol 2015, FATF and MENAFATF, 2015).

One of the limitations, however, of relying on law enforcement data – as we and others have done – is that it is both potentially biased by organisational priorities and cannot reveal the extent to which behaviour patterns are shared with those who do not get caught (Cockbain, Bowers and Vernon 2018). HMRC's Fraud Investigation Service, for example, was until recently a target-driven organisation that sought to charge one thousand individuals a year with offences (York, 2018). This approach, our focus group suggested, could have led to a historic organisational drive towards simpler and easier cases; the outcomes of the organisation's more recent move towards taking on more complex high-impact cases (York, 2018) would not be seen for several years given the length of investigations required. Similarly, the prevalence of cash in our sample could be accounted for by the fact that the Fraud Investigation Service has a specialist team devoted to seizing cash, rather than being seen as a true reflection of the behaviour patterns of offenders.

Indeed, recent research based on interviews with presumed offenders (rather than on law enforcement data on those apprehended) has found evidence for the use of more complex identity disguising strawman constructions and international money movements (Teichmann, 2020). In our study, we found two highly complex outliers. The empirical landscape is therefore inconclusive, and it is possible to deduce that money laundering behaviour is likely

to be varied, with some using simple methods and others engaged in more complex behaviour. It becomes an interesting question as to why certain offenders choose certain methods.

Our study found a significant positive correlation, with a medium effect size, between the complexity of offending and the estimated value of the fraud (revenue loss prevented). This finding suggests that having a greater amount of money to hide either necessitates greater complexity (it being less possible to hide millions in a plastic carrier bag than it is to hide thousands), or that it provides greater access to complexity, as seen in the two cases in our sample where individuals were able to pay for the services of financial professionals as part of their scheme. A small number of other recent studies have sought to unpick why money launderers choose the methods they do. Teichmann's (2020) interviews of suspected money launderers found that the perceived riskiness of a given method played a large role, with suspects preferring to use less regulated markets. Hetzel (2018) found evidence of a link between the nature of the predicate offence and the money laundering method used: for those predicate offence crimes that are cash-generating such as drug sales, for example, there is a higher frequency of cash-based money laundering methods being used.

Overall, therefore, our findings support the argument that offenders are likely to make rational decisions as to how and with whom to launder money (Clarke and Cornish, 2001). This includes basing their decision on considerations of what options may be necessary or feasible on the amount of money they have to launder, which might be low risk (Teichmann, 2020) and which might be practical given the way in which the proceeds have been generated (Hetzel, 2018). Building a richer picture of these decision-making processes could be a fruitful area of future research and could support the intervention activities of practitioners who seek to increase the (perceived) risks and effort associated with money laundering, whilst reducing the (perceived) benefits (Clarke, 2017).

## 6. Conclusion

As increasing emphasis is placed on tackling money laundering in the UK and abroad, it is more important than ever that policy-makers and practitioners have a thorough and evidence-based understanding of the issue. In this study, we identified some limitations of the current approach that could potentially be misinforming and misdirecting anti-money laundering efforts. Most notably, we found that the ubiquitous three-stage model of money laundering,

relied upon around the world, was not supported in our empirical data and may well be flawed, that the cash courier, a poorly understood and little-researched figure, was actually one of the most prominent actors identified, and that money laundering operations assessed as lower value also tended to involve fewer and simpler laundering methods. Our findings resonate with various prior empirical studies and underline the importance of further targeted research into money laundering, particularly into offenders' modus operandi, roles and decision-making. It is our hope that such future research, and especially future collaborations between law enforcement and academia, will shine even greater light on this most clandestine of crimes.

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**Availability of data and material** The authors declare that the data and materials support their published claims and comply with field standards.

**Code availability** Not applicable.

**Conflicts of interests/competing interests** At the time of the research the first author (Rian Matanky-Becker) was employed by HMRC, however this research was done independently and not as part of her work for the organisation. HMRC were given sight of an earlier draft but only to review for security concerns and had no influence over content. On review, HMRC suggested no changes. Ella Cockbain has no financial or non-financial interests to declare.

## References

- Benson, K., (2016). The facilitation of money laundering by legal and financial professionals. PhD Thesis, University of Manchester.
- Board of Governors of the Federal Reserve System, (2002). Report to Congress in accordance with §356c of the USA Patriot Act. Washington, DC: Board of Governors of the Federal Reserve System.
- Cassella, S., (2018). "Toward a new model of money laundering: Is the “placement, layering, integration” model obsolete?", *Journal of Money Laundering Control*, Vol. 21 No. 4, pp. 494-497
- Clarke, R., (2017). Situational crime prevention. In Wortley, R., & Townsley, M., (Eds.), *Environmental criminology and crime analysis* (pp. 286 – 303). Abingdon, UK: Routledge.
- Clarke, R., & Cornish, D., (2001). Rational choice, In Paternoster, R., & Bachman, R., (Eds.), *Explaining criminology and crime: essays in contemporary criminological theory* (pp. 23-42). Los Angeles, CA: Roxbury.
- Clarke, R., & Cornish, D., (1986). *The reasoning criminal: rational choice perspectives on offending*. New York: Springer.
- Clarke, R., & Felson, M., (1993). *Routine activity and rational choice: advances in criminological theory 5*. New Brunswick, NJ: Transaction.
- Cockbain, E., (2018). *Offender and victim networks in human trafficking*. Abingdon, UK: Routledge.
- Cockbain, E., Bowers K., Vernon L., (2018). Using law enforcement data in trafficking research. In Winterdyk, J., & Jones, J., (Eds.), *The Palgrave international handbook of human trafficking*. Basingstoke: Palgrave Macmillan.
- Cornish, D., (1994). The procedural analysis of offending, and its relevance for situational crime prevention. In Clarke, R., (Eds.), *Crime prevention studies*, vol 3 (pp.151-196). Monsey, NY: Criminal Justice Press.
- Crown Prosecution Service, (2018). The code for crown prosecutors. <https://www.cps.gov.uk/sites/default/files/documents/publications/Code-for-Crown-Prosecutors-October-2018.pdf>. Accessed 11 August 2019.

- Europol, (2015). Why is cash still king? A strategic report on the use of cash by criminal groups as a facilitator for money laundering. The Hague, Netherlands: European Police Office Financial Intelligence Group.
- Financial Action Task Force, (2019). Money laundering frequently asked questions. <https://www.fatf-gafi.org/faq/moneylaundering/#d.en.11223>. Accessed 26 May 2019.
- Financial Action Task Force, (2018). Professional money laundering. FATF report. <http://www.fatf-gafi.org/media/fatf/documents/Professional-Money-Laundering.pdf>. Accessed 27 May 2019.
- Financial Action Task Force, (2005). Money laundering and terrorist financing typologies 2004 – 2005. [http://www.fatf-gafi.org/media/fatf/documents/reports/2004\\_2005\\_ML\\_Typologies\\_ENG.pdf](http://www.fatf-gafi.org/media/fatf/documents/reports/2004_2005_ML_Typologies_ENG.pdf). Accessed 27 May 2019.
- Financial Action Task Force, (1990). Annual report. <http://www.fatf-gafi.org/media/fatf/documents/reports/1990%20ENG.pdf>. Accessed 26 June 2019.
- Financial Action Task Force & Middle East and North Africa Financial Action Task Force (2015). Money laundering through the physical transportation of cash. FATF, Paris, France and MENAFATF, Manama, Bahrain.
- Ferwerda, J., (2013). The effects of money laundering. In Unger, B., & van der Linde, D., (Eds.), Research handbook on money laundering (pp. 35-56). Cheltenham: Edward Elgar Publishing Ltd.
- Gelemerova, L., (2011). The anti-money laundering system in the context of globalisation: a Panopticon built on quicksand? Nijmegen: Wolf Legal Publishers.
- Gov.uk, (2019). New taskforce to tackle economic crime. <https://www.gov.uk/government/news/new-taskforce-to-tackle-economic-crime>. Accessed 26 June 2019.
- Hetzl, F., (2018). The act of cleaning illegal profits: what we know and don't know about money laundering. In Reichel, P., & Randa, R. (Eds.), Transnational crime and global security (pp.115-139). Santa Barbara: Praeger.

- Hirschi, T., & Gottfredson, M., (1983). Age and the explanation of crime. *American Journal of Sociology*, 89(3), 552-84.
- Holgersson, S., (2015). An Inside Job: managing mismatched expectations and unwanted findings when conducting police research as a police officer. In Cockbain, E., & Knutsson, J., (Eds.), *Applied police research: challenges and opportunities*. Abingdon, UK: Routledge.
- HM Government and UK Finance, (2019). *Economic Crime Plan 2019 – 22*. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/816215/2019-22\\_Economic\\_Crime\\_Plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/816215/2019-22_Economic_Crime_Plan.pdf). Accessed 27 June 2021.
- HM Revenue and Customs, (2017). *Annual report and accounts 2016 to 2017*. <https://www.gov.uk/government/publications/hmrc-annual-report-and-accounts-2016-to-2017>. Accessed 23 July 2019.
- HM Treasury, (2020a). *Economic crime levy: Funding new government action to tackle money laundering*. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/902445/Levy\\_Consultation\\_Document\\_-\\_FINAL\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/902445/Levy_Consultation_Document_-_FINAL_.pdf). Accessed 27 June 2021.
- HM Treasury (2020b). *Spending Review 2020*. <https://www.gov.uk/government/publications/spending-review-2020-documents/spending-review-2020>. Accessed 27 June 2021.
- HM Treasury, (2021). *BUDGET 2021: Protecting the jobs and livelihoods of the British people*. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/966869/Budget\\_2021\\_Print.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/966869/Budget_2021_Print.pdf). Accessed 27 June 2021.
- Home Office and HM Treasury, (2016). *Action Plan for anti-money laundering and counter-terrorist finance*. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/517992/6-2118-Action\\_Plan\\_for\\_Anti-Money\\_Laundering\\_web\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/517992/6-2118-Action_Plan_for_Anti-Money_Laundering_web_.pdf). Accessed 26 June 2019.
- Home Office and HM Treasury, (2016). *UK national risk assessment of money laundering and terrorist financing*. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/468210/UK\\_NRA\\_October\\_2015\\_final\\_web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/468210/UK_NRA_October_2015_final_web.pdf). Accessed 26 June 2019.

- Home Office and HM Treasury, (2020). National risk assessment of money laundering and terrorist financing 2020. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/945411/NRA\\_2020\\_v1.2\\_FOR\\_PUBLICATION.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/945411/NRA_2020_v1.2_FOR_PUBLICATION.pdf) Accessed 27 June 2021.
- Kleemans, E., (2015). Organised crime research: challenging assumptions and informing policy. In Cockbain, E., & Knutsson, J., (Eds.), Applied police research: challenges and opportunities. Abingdon, UK: Routledge.
- Kleemans, E., van Koppen, M., (2020). Organized crime and criminal careers. In Tonry, M., & Reuter, P., (Eds.), Organizing crime: mafias, markets and networks. Chicago, IL: Chicago University Press.
- Leclerc, B., (2017). Crime scripts. In Wortley, R., & Townsley, M., (Eds.), Environmental criminology and crime analysis (pp.119-141). Abingdon, UK: Routledge.
- Levi, M., (2015). Money for crime and money from crime: financing crime and laundering crime proceeds. *European Journal on Criminal Policy and Research*, 21(2), 275-297.
- Levi, M., & Reuter, P., (2006). Money laundering. *Crime and Justice*, 34(1), 289-375.
- Lewis, C., & Stanley, C., (2000). Women accused of sexual offences. *Behavioural Sciences and the Law*, 18(1), 73-81.
- Malm, A., & Bichler, G., (2013). Using friends for money: the positional importance of money-launderers in organised crime. *Trends in Organised Crime*, 17, 365-381.
- Maxfield, M., & Babbie, E., (2011). *Research methods for criminal justice and criminology*. Sixth edition. Wadsworth, Belmont.
- Ministry of Justice, (2018). Statistics on Women and the Criminal Justice System 2017. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/759770/women-criminal-justice-system-2017..pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/759770/women-criminal-justice-system-2017..pdf). Accessed 11 August 2019.
- National Audit Office, (2016). HMRC annual report and accounts 2015 – 2016. <https://www.nao.org.uk/wp-content/uploads/2016/07/HMRC-Annual-Report-and-Accounts-2015-16.pdf>. Accessed 07 February 2021.



- National Crime Agency, (2014). High end money laundering strategy and action plan. <https://nationalcrimeagency.gov.uk/who-we-are/publications/16-high-end-money-laundering-strategy/file>. Accessed 27 May 2019.
- National Crime Agency, (2018). National Economic Crime Centre launched. <http://www.nationalcrimeagency.gov.uk/news/1501-national-economic-crime-centre-launched>. Accessed 03 February 2019.
- Peinhardt, C., & Sandler, T., (2015). Transnational cooperation: An issue-based approach, Oxford Scholarship Online.
- Proceeds of Crime Act, (2002). Legislation. <https://www.legislation.gov.uk/ukpga/2002/29/part/7>. Accessed 26 May 2019.
- Riccardi, M., & Levi., (2018). Cash, crime and anti-money laundering. In King, C., Walker, C., Gurule, J., (Eds.), *The Palgrave handbook of criminal and terrorism financing law*. Basingstoke: Palgrave Macmillan
- Riccardi, M., Soriani, C., & Giampietri, V., (2016). Mafia infiltration in legitimate companies in Italy. In Savona, E., Riccardi, M., Berlusconi, G., (Eds.), *Organised crime in European business*. Abingdon, UK: Routledge.
- Soudijn, M., (2014). Using strangers for money: a discussion on money launderers in organised crime. *Trends in Organised Crime*, 17, 199-217.
- Soudijn, M. & Reuter, P., (2016). Cash and carry: the high cost of currency smuggling in the drug trade. *Crime Law and Social Change*, 66(3), 271-290.
- Sturge, G., (2018). UK prison population statistics. House of Commons briefing paper. <file:///C:/Users/7225120/Downloads/SN04334.pdf>. Accessed 23 July 2019.
- Teichmann, F., (2020). Recent trends in money laundering. *Crime, Law and Social Change* 73(3), 237-247.
- The Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations (2017). Legislation. <https://www.legislation.gov.uk/uksi/2017/692/contents/made>. Accessed 16 August 2020.
- Ulmer, J., & Steffensmeier, D., (2014). The age and crime relationship: social variation, social explanations. In Beaver, K., Barnes, J., Boutwell B., (Eds.), *The nurture versus biosocial*

- debate in Criminology: on the origins of criminal behaviour and criminality. Thousand Oaks, CA: SAGE Publications Ltd.
- Unger, B., (2006). The amounts and effects of money laundering, The Dutch Ministry of Finance Report, Den Haag, Netherlands: Dutch Ministry of Finance.
- Unger, B., (2013). Money laundering regulations: from Al Capone to Al Qaeda. In Unger, B., & van der Linde, D., (Eds.), Research handbook on money laundering (pp. 19-32). Cheltenham: Edward Elgar Publishing Ltd.
- van Duyne, P., (2003). Money laundering policy: fears and facts. In van Duyne, P., von Lampe, K., Newell, J., (Eds.), Criminal finance and organising crime in Europe (pp. 67 – 104). Nijmegen: Wolf Legal.
- van Duyne, P., & Levi, M., (2005). Drugs and money: managing the drug trade and crime-money in Europe. Abingdon, UK: Routledge.
- van Duyne, P., (2007). Criminal finances and state of the art. Case for concern? In van Duyne, P., Maljevic, A., van Dijck, M., von Lampe, K., Harvey, J., (Eds.), Crime business crime money in Europe. Wolf Legal Publishers.
- van Duyne, P., (2013), Crime-money and financial conduct. In Unger, B., & van der Linde, D., (Eds.), Research handbook on money laundering (pp. 232-250). Cheltenham: Edward Elgar Publishing Ltd.
- 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 Unger, B., & van der Linde, D., (Eds.), Research handbook on money laundering (pp. 435 – 452). Cheltenham: Edward Elgar Publishing Ltd.
- van Onna, J., (2018). Blurred lines: a study of white-collar crime involvement. PhD dissertation. Vrije Universiteit Amsterdam, Department of Criminal Law and Criminology.
- Wortley, R., & Townsley, M., (2017). Environmental criminology and crime analysis. In Wortley, R., & Townsley, M., (Eds.), Environmental criminology and crime analysis (pp. 1 – 27). Abingdon, UK: Routledge.
- York, S., (2018). Treasury Committee Oral evidence: Economic Crime, HC 940. <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/treasury-committee/economic-crime/oral/91663.html>. Accessed 11 July 2019.

York, S., (2021). HMRC's response to the rise of the enabler. Tax Journal.  
<https://www.taxjournal.com/articles/-hmrc-s-response-to-the-rise-of-the-enabler-44236>  
Accessed 25 July 2021.

## Appendix I: Ethical considerations

This research was approved by [University name removed for review] Research Ethics Committee. The data contained personal information including about people potentially belonging to vulnerable populations and – by nature of using pre-existing law enforcement records – involved unwitting participants. Consequently, measures to protect participants' confidentiality and anonymity were key. We ensured personal information did not leave secure HMRC systems and anonymised the data that was extracted and entered into the coding template. We focused on aggregate patterns and trends and, where case studies are given, removed all personal identifier information and changed details in order to protect confidentiality.