7

Cash, Crime and Anti-Money Laundering

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Introduction

In most countries around the world, cash[1] is the main means of transfer (or 'typology', in official language) identified in money laundering/terrorist financing (ML/TF) reports. In Europe, most suspicious transaction/activity reports (STRs/SARs) are related to cash use or cash smuggling, and most seized assets are in the form of cash and movable goods. Why is 'cash still king'[2] in the recorded component of Anti-Money laundering (AML)?

Cash facilitates the laundering of illicit funds because it is anonymous and cannot normally be traced.[3] It is a bearer negotiable instrument which gives no details either on the origin of the proceeds or on the beneficiary of the exchange. This makes it harder for law enforcement to follow the audit trail—although it is also in principle most readily identified, when deposited in financial institutions, as 'out of character' with persons' 'known' or believed income and wealth. Cash is also a preferred means of payment on the leisure pursuits (including drugs purchases) and the 'bling' that are often one of the motives for crime.

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This chapter provides a review of the numerous facets of the relationship between cash and AML. First, it presents some statistics of how cash is spread in the legitimate economy. Second, it discusses what criminal activities are more prone to generate cash illicit proceeds. Third, it argues how cash is used in the laundering cycle, namely in terms of cash smuggling and of cash-intensive businesses and assets. Then, it provides a review of the regulatory measures introduced to reduce the use of cash and minimise the risk that banknotes are used for criminal purposes. It also discusses the challenges in seizing illicit cash—and managing it once seized. Finally, it suggests some policy and research implications. The focus of the chapter is Europe, but references to US and other countries are also made.

Measuring Cash: Paradoxes and Surprises

As hard to trace, cash is also hard to measure routinely. Because cash payments are not usually recorded (see below), there are no direct proxies of how (for which purpose, how often, in which form) it is used by individuals and businesses.[4] Only indirect measures exist and are briefly discussed below. This is the first paradox: despite being one of the oldest means of payment, cash is still the one we least know about—both in relation to the legal and the illegal economy. The knowledge gap is particularly evident if compared to electronic transactions: data on credit or debit card use are largely available, and are also widely exploited for marketing purposes by companies and banks.

The Increasing Value of Banknotes in Circulation

The first indirect measure of cash is represented by the volume and value of banknotes in circulation. These statistics provide a general indication of the magnitude of the demand of cash across time and space, but do not inform on what printed notes are then used for. The statistics of the two main central banks in Europe—the European Central Bank (ECB) and Bank of England—show that the issuance of new banknotes has constantly grown in the last 15 years. In the EU, it has increased, in terms of value, by five times since 2002, while in the UK by about two times since 2004 (see Fig. 7.1). In both cases, banknotes have grown at a much higher rate than GDP and inflation, and despite the diffusion of alternative payment methods.

Looking at the different denominations, in the EU, the highest increase (in terms of value) has been of 500, 100 and 50 euro banknotes. In particular,

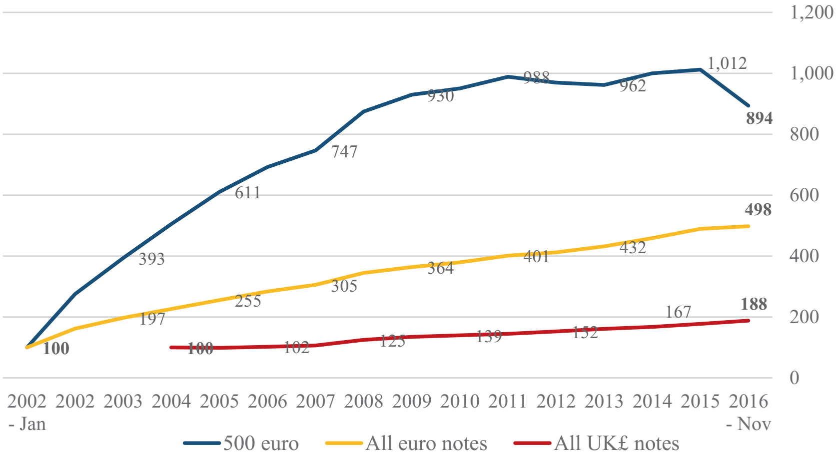

Fig. 7.1 Value of Euro and UK£ banknotes in circulation. Source: Authors' elaboration on ECB and BOE data. Note: All December values, except when specified. For euro notes, index 2002 = 100. For UK£, index 2004 = 100

the 500 euro note (which will be discontinued by the end of 2018—see below) has increased by nine times, almost twice the growth of other euro notes (though from a lower base rate). In November 2016, these three denominations represent respectively 25%, 22% and 40% of the total value of the outstanding euro notes. In the UK, the highest denomination note (the £50 banknote) increased most in terms of value (+230%), though the £20 note still represents most of the value of notes in circulation in the UK (roughly 60%).

In the euro area, despite the European Monetary Union, wide differences in issuing banknotes exist across different states. While Germany represents, by far, the main issuer, Luxembourg is the outlier when comparing the value of issued banknotes to its GDP (about 200%), while France, Italy and Germany range between 4% and 16%. On average, in the euro area, the value of banknotes rose from 5% of GDP to more than 10% since 2002[5] (Fig. 7.2).

In the United States 'cash remains a unique, resilient, and heavily used consumer payment instrument'.[6] According to Fed data, the amount of currency in circulation has increased steadily over time—and that of higher denominations has accelerated after the 2008 financial crisis. However, the value of cash on GDP (about 7.5%) remains lower than in the euro area.[7]

How can we explain the growth of banknotes, especially of high-denomination notes—500 euro above all? And why are some countries printing more bills than others?

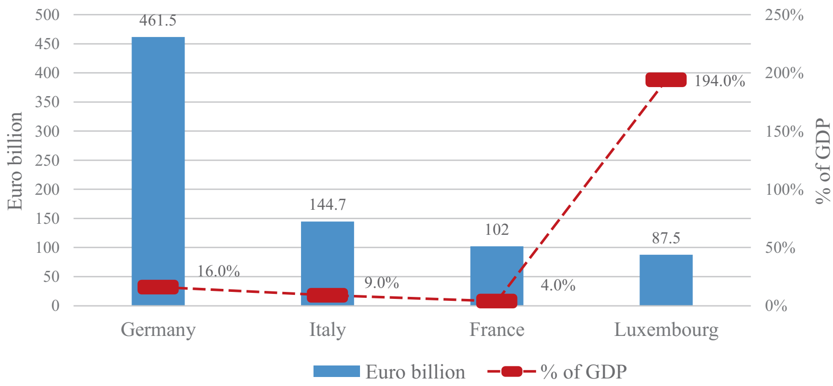

Fig. 7.2 Euro banknote issuers in 2013. Selected EU countries

Only Part of Circulating Cash Is Used for Transactions

Some of these questions can be answered looking at the results of surveys on the use of cash conducted among individuals and businesses—a second indirect measure of cash diffusion. An ECB survey conducted in 2011 (with 2008 data) in eight member states (Belgium, Germany, Spain, France, Italy, Luxembourg, the Netherlands and Austria) revealed that only one-third of the euro banknotes in circulation are used for transaction purposes.[8]

The same 2011 ECB survey pointed out the different attitude in using cash for purchases across different EU countries (Table 7.1). France, the Netherlands and Luxembourg emerge as the most cash-averse countries (i.e. those with the lowest percentage of respondents using cash, whatever the value of the transaction), while Italy and Spain, followed by Austria, are the most 'cash-enthusiastic'. On average, while one-fifth of the population in these eight EU MS use cash for purchases between €200 and 1,000—the percentage reduces to 4% for assets of more than 10,000 euro. These figures have been confirmed by a more recent ECB report (based on national payment diary surveys).[9]

Percentages are similar in the United States, where cash is used in about one-third (32%) of all transactions (50% of those below 25 dollars). According to a latest survey by the Federal Reserve Bank of San Francisco, cash is widely used even when other options are available, and is the preferred means of payment in six out of nine merchant categories, by very young (18–24 years) and elderly (65 and more) people and the poorest ones.[10] In our view, this is likely to be the product of financial exclusion, habituation, convenience and a range of other factors.

Table 7.1 Percentage of respondents always or often using cash by value of purchase

	<20 euro (%)	30–100 euro (%)	200–1000 euro (%)	>10,000 euro (%)
Belgium	84	48	18	5
Germany	91	69	21	4
Spain	90	64	30	6
France	80	15	3	0
Italy	91	77	31	4
Luxembourg	77	27	10	3
The Netherlands	65	20	8	4
Austria	82	60	29	10
AVERAGE (8 EU MS)	**87**	**55**	**20**	**4**

Source: ECB, 2011

Cash-Ratio: South-Eastern Europe on Top

The results at the European level are confirmed by the analysis of cash-ratio. It is another indirect measure, calculated as the ratio between the amount of ATM withdrawals (proxy of cash use) and the sum of total payments, including those through point-of-sale (POS).[11] On average (2011–2015) in the EU, about 42% of payments are made in cash, but large differences exist across countries: if in Finland, the UK, France and Sweden the cash-ratio is below 30%, in Greece, Bulgaria and Romania banknotes and coins are used for more than 80% of payments. Among big countries, Germany and Italy also record high values (65% and 53.2%, respectively) (Table 7.2).

These differences across countries may be driven by different factors, including maximum thresholds on the use of cash posed by regulation (discussed below), financial culture, ageing of the population and availability of alternative payment instruments, first of all POS among merchants.[12] As regards the latter, Table 7.3 presents the first ten countries in the European Union (and UK) by number of POS per capita. Luxembourg ranks first, representing an outlier, followed by Italy, UK and Spain. It has to be noted that much depends on the nature of the local economy, as POS diffusion varies across economic sectors, with hotels, restaurants and retail trade on top.

How to Explain the Gap? The Illegal Economy

The figures presented above help to get a broad overview of how cash is spread in the economy of Europe and other major countries. But they raise also a number of questions. First, despite the diffusion of alternative payment methods, cash still appears as the most preferred means of payment, especially in

Table 7.2 Cash-ratio across European countries. First and last five countries

Country	Cash-ratio (%) (average 2011–2015)
1. Greece	88.8
2. Bulgaria	86.8
3. Romania	84.8
4. Slovakia	73.6
5. Latvia	70.9
[…]	
24. The Netherlands	33.8
25. Finland	28.7
26. UK	27.0
27. France	25.3
28. Sweden	23.4
Euro Area	**46.8**
European Union	**41.9**

Source: Authors' elaboration on ECB data

Table 7.3 First ten EU countries with highest POS rate

EU countries	POS terminals per million inhabitants
Luxembourg	260,596
Italy	32,596
UK	30,077
Spain	29,841
Finland	27,985
Portugal	27,645
Cyprus	26,931
The Netherlands	26,273
Denmark	24,639
Croatia	24,551
EU (median)	**18,758**

Source: Savona and Riccardi, 2017

certain countries and sectors. But (at most) only one-third of banknotes in circulation are estimated to be used for legitimate transaction purposes. Nevertheless, in the same period, cash has been increasing at a higher rate than GDP and inflation, and high-denomination notes like 500 euro (the least likely to be used for small purchases—and also the hardest to get accepted in ordinary retail establishments) have been growing even more. Among the countries issuing more banknotes in Europe is Luxembourg—one of the most cash-averse populations and the one with the highest ratio of POS per capita.

How can we explain these paradoxes? And how can we fill the gap between cash in circulation and the actual demand for legal transactions? Hoarding could be part of an answer, as despite the risk of theft, loss or fire, banknotes are a cheap store of value, especially in an era of low inflation and almost negative interest rates.[13] The demand for cash as a store of value has also increased as a consequence of the financial crisis and especially of the failure of Lehman Brothers in 2008, which led to massive cash withdrawals (most often in high denominations) from deposits as a precautionary measure against the risk of bank failures above the European compensation level.[14] Also banknotes held abroad represent a significant share. But a key role in explaining this gap is certainly played by illegal transactions.

Indeed, several studies have pointed out a correlation between cash diffusion and the level of illicit activities. At European level, the countries with highest cash-ratio (Greece, Romania, Bulgaria) have also very high estimated levels of shadow economy.[15] In Italy, the areas with higher cash-ratios are also those with higher organised crime, tax evasion, irregular labour and money laundering STRs.[16] And in the US, a recent study found that a reduction in cash circulation reduced the overall predatory recorded crime rate, as well as larceny, burglary and assault statistics.[17] This is the first element to consider: the diffusion of cash in legal markets cannot be fully understood without taking into account illegal markets (including—as in the Wright study—opportunities for theft and robbery). While some criminal activities generate cash, most benefit from a cash-intensive economy.

Cash-Generating Illicit Activities

But what are the most cash-generating predicate offences? The cash nature of illicit proceeds depends on a variety of factors, such as the nature of the target and the victim, and the nature and price of the illicit commodity to be exchanged (if any).

Drugs are usually considered as a cash-intensive market. Though this may largely reflect the nature of typical money-laundering investigations, in a Europol survey in 2015, most European AML units reported drug-trafficking as the predicate offence most closely linked to the use of cash in ML schemes.[18] Drug dealers usually receive multiple cash payments, likely in smaller bills, which then require aggregation, often through exchange in higher denomination notes, and laundering.[19] There is wide evidence that this happens, for example, in both the trafficking of drugs by Mexican cartels in the United States[20] and the trade of cocaine from Colombia to Europe.[21] In both cases, smaller denominations of cash are collected in central counting houses, converted into high-denomination notes (like 500 euro or 100 US$) before being smuggled (see below) or stored elsewhere. But cash is also the preferred means for purchase of drugs at the wholesale level: according to some estimates, about 80% of the money generated by Mexican drug trafficking cartels is used to buy new shipments of cocaine and is dispatched directly from destination markets (e.g. the US) to Colombia without passing through Mexico.[22] One question is how this pattern may change in the aftermath of the diffusion of online drug markets where virtual currencies, bitcoins overall, are increasingly adopted: though 'cashing out' may be required at some stage in some place, at least until e-currencies command general acceptance.[23]

Other 'traditional' criminal activities, such as extortion, sexual exploitation and smuggling of migrants, are likely to generate cash proceeds too. In Italy and Mexico, most businesses victims of extortion racketeering pay protection money in cash,[24] although other forms of payment (e.g. imposition of suppliers or raw materials) may be adopted. Though the methods of payment for grand corruption may differ, corruption is the second predicate offence most frequently reported by law enforcement agencies (LEAs) in relation to cash.[25] Indeed, domestic bribes are traditionally paid in cash, as demonstrated by numerous victimisation surveys,[26] although both petty and grand corruption may take other forms.

Similar patterns characterise tax crimes. While large tax evasion schemes may be cash-less, and rather involve complex corporate schemes set up in offshore jurisdictions, 'petty' tax evasion carried out by individuals and businesses is mainly based on under-declaration and on informal payments made in cash. Undeclared revenues are then used to carry out informal cash-payments to suppliers and workers thus pumping, with a flywheel effect, the size of the underground economy.

On the other side, all the variety of cybercrimes (e.g. phishing, ransomwares) appear as the least cash-generating crimes, as they can remain often confined to virtual environments: hackers can attack a victim's account and move the money to another mule's account; or in the case of ransomware can block the victim's computer, demanding bitcoins or some other non-cash form in exchange for cyber-freedom. However, the proceeds generated by these activities may need, at a certain point, some cashing-out activity, as shown in Fig. 7.3.

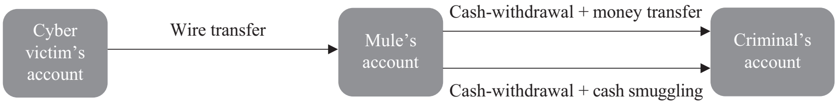

Fig. 7.3 From cyber to cash. Source: Authors' elaboration on Europol, 2015

Cash Smuggling

Smuggling or Laundering?

Cash smuggling can arise because of the need to move the generated illicit cash elsewhere. This is particularly true for those criminal activities with a transnational nature, such as drug trafficking or migrant smuggling, where criminals may wish to move the proceeds to their country of family origin for laundering purposes (e.g. investing in the domestic real estate market), for hoarding, to purchase further illicit commodities or to improve their lifestyles. The transfer of cash across the border in violation of currency reporting requirements, that is, above the permitted maximum threshold and without justification, is usually referred to as 'bulk cash smuggling'.[27]

Some authors note that cash smuggling is not strictly money laundering, in the sense that it does not necessarily disguise the criminal origin of the funds: on the contrary, it may 'increase the conspicuousness of its questionable origins since the money is converted into high denomination bills'.[28] However, moving illicit proceeds across borders can be an effective way to distance this money from the predicate offence which originated it, at least unless intelligence or enforcement agencies are tracking it at the time.[29] But the (judicial) relationship between cash smuggling and money laundering is certainly a debated issue, as demonstrated also by the case of *Cuellar v United States*.[30] Humberto Cuellar was convicted in the US for international money laundering after officers in 2004 found more than $80,000, presumed to be proceeds of drug trafficking, hidden in a vehicle he was driving from Texas across the US border into Mexico. Cuellar appealed, arguing that his conviction for money laundering should not stand because he did not attempt to create the appearance of legitimate funds. Instead, according to Cuellar, bulk cash smuggling characterised his actions better than money laundering. In 2008, the US Supreme Court supported Cuellar, quashing the conviction for money laundering: the applicable section of the Money Laundering Control Act of 1986[31] required that Mr. Cuellar knew that the purpose—not merely the effect—of his transporting the money was to conceal or disguise its illicit nature.

Notwithstanding these judicial arguments and any difficulties in spending large-denomination notes or depositing them directly, bulk cash smuggling is widely used by several criminal organisations, in particular those involved in international drug trafficking. A US National Drug Threat Assessment confirmed that, despite the 2008 Merida Initiative, 'bulk cash is a prominent method' for Mexican drug cartels to move their cash back to Mexico,[32] especially with the increased AML controls on the financial sector and on money service businesses.[33] Transportation of cash appears to be the preferred method also for Colombian drug traders to transfer the cocaine revenues generated in Europe to the home country.[34]

Most cash-smuggling methods have, as a pre-condition, the aggregation of the cash proceeds into higher denomination banknotes in order to minimise volume and weight, and ease transportation (see also below): £250,000 in 500 euro notes weighs 0.6 kilos and fits in a medium-size envelope, whereas they weigh 15–20 kilos in £20 notes.[35] Another important issue is the conversion into usable currencies. This could be done in the country of receipt or destination. However, there may be a decision not to exchange, especially if originally denominated in US$ or in euro: should the beneficial owners wish to keep cash for hoarding purposes, then strong currencies could be preferred because they are more stable over time. Moreover, the 'dollarisation' of some central or southern American countries' economies (first of all Mexico and Ecuador, where it is legal tender) make US dollars widely accepted by merchants and banks. According to a 2015 FATF survey, US dollars and euro represents about 70% of the currencies in suspected criminal cash transport cases.[36]

Cash Smuggling Methods

As stated, cash smuggling techniques are various. Cash carried through vehicles and by air passengers appear as the most frequent typologies, according to LEAs and customs agencies worldwide.[37] They are followed by cash moved through mail post and through cargo, either air or maritime freight. When money is moved through motor vehicles, it is usually vacuum sealed in plastic bags and then concealed in wheel wells, panels and spare tire compartments. Sometimes the same cars and lorries used for transporting the drugs (e.g. tractor-trailer trucks used by Mexican cartels to carry cocaine north to the US) are used to move the illicit cash back. According to Farah, who interviewed a number of US and Mexican law enforcement officers, cash is 'smurfed' in smaller shipments ranging from US$150,000–500,000, through multiple vehicles, and often with rotating drivers in order to minimise the risk of large-scale seizures by guards.[38]

Cash mules seem to be the preferred method by drug trafficking organisations to move back illicit cash from Europe to their countries of origins. A recent study by Soudijn and Reuter analysed six cases of smuggling of cash, generated by cocaine trade, from the Netherlands to Colombia and other Latin American countries between 2003 and 2011. The investigation revealed the wide network of couriers employed—about 181 people, hired ad-hoc—all well monitored by drug dealers through a detailed accounting system.[39] Money mules generally carried 300,000 euro each, packed in 500 euro bills. The cost of cash-smuggling through money mules is estimated by the authors between 4.4% and 9.2% of the total value—of which about 3% related to the conversion in higher denomination notes—without taking into account the costs resulting from cash seized and those related to brokers' or coordinators' fees.[40]

Cash-Intensive Businesses and Assets

Once moved to the desired location, if there is a need to launder the illicit cash (rather than simply store or spend it, or re-invest it directly in criminal enterprises), then cash-intensive businesses and assets may play a crucial role.[41]

Cash-Intensive Businesses

A business could be considered highly cash-intensive if (a) it operates mainly on cash-transaction basis; (b) its assets consist mostly of cash or liquid (current) assets.[42] Bars, restaurants, retail trade shops, supermarkets, car washes and betting/gambling businesses (such as casinos) usually receive most payments by clients in cash, and this could be helpful for laundering purposes. It would be easier to justify extra (illicit) proceeds as legitimate revenues and it would be possible to deposit large volumes of cash as daily earnings on companies' bank accounts, thus easing the placement of illicit funds into the financial circuit.[43]

Not surprisingly, recent studies show that cash-intensive sectors are usually preferred by organised crime infiltrating legal businesses. For example, in Italy, wholesale and retail trade, bars, restaurants, hotels and construction represent more than 70% of the approximately 2,000 companies confiscated from mafia groups in the last 30 years (chart below). Confiscated betting agencies and video-lottery/slot machine businesses, despite being low in number, weigh relatively high when compared to their numbers in the legal economy.[44]

A more recent report concludes that these sectors are associated with the highest estimated money laundering risk in the country.[45] Clients seldom pay cash for construction contracts but, at least in Italy, construction is the sector with the most liquid assets (about 70% of average total assets of Italian building companies is held in cash, inventory, receivables and other current assets). It would be rational for criminals to want their businesses to stay liquid in order to ease a quick selling-off should they feel themselves to be under investigation or at risk of seizure and confiscation. In any case, the construction industry—along with bars, restaurants and agriculture—is also the sector with the highest prevalence of irregular workers, who may become another way to launder illicit proceeds—through the distribution of black salaries paid in cash and further spent by workers in the legitimate economy (Fig. 7.4).

The same economic activities—bars, restaurants, retail trade, construction—often appear in relation to firms controlled by organised crime groups in other European (and non-European) countries, for example, in Spain, Sweden, Slovenia, France, the Netherlands, UK, but also in the US and in Canada.[46] In the Netherlands, a recent report finds that cash-intensiveness is a key component of the ML risk of sectors such as hotels, catering and entertainment (which includes gambling, gaming but also legalised prostitution).[47] In order to prevent criminal infiltration, most of these activities (and other cash

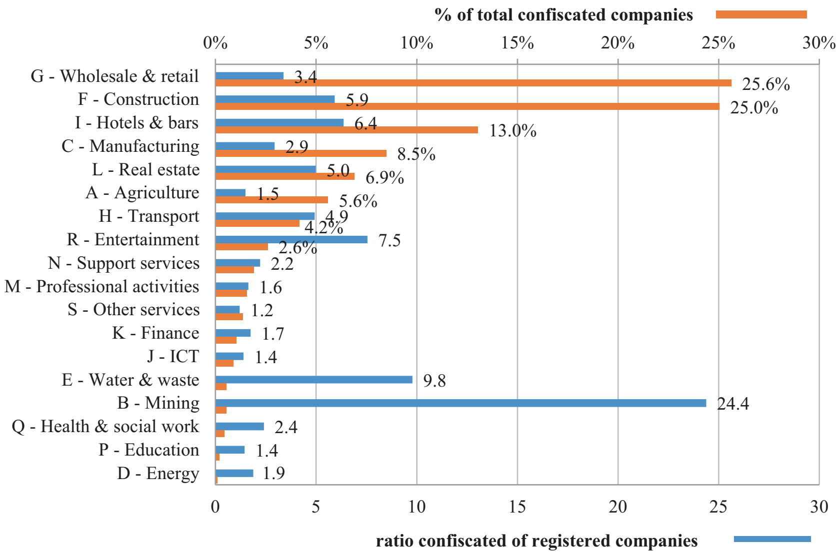

Fig. 7.4 Confiscated companies across business sectors in Italy (1984–2012): Percentages of the total and ratio of registered companies. Source: Riccardi, Soriani and Giampietri (2016)

businesses) are also subject in the Netherlands to the so-called BIBOB law (public administration probity screening act) which provides that companies' or persons' records may be required to be examined before a permit or a subsidy is granted, though this does not mean that they will be examined or examined efficiently.[48]

Cash-Intensive Assets

But companies are not the only method criminals may have at their disposal to place illicit cash in the legitimate economy. They may directly acquire assets in cash—and then trade on the legal market. This much depends on the maximum threshold for cash use foreseen by the local regulation (discussed below) and their enforcement in practice (e.g. vendors may sell for cash and hide this from the tax authorities and/or their partners). Although it appears to be a safe and common place for investment or laundering, real estate is a less cash-intensive market than others. In most European countries it is difficult to buy properties for cash, also because property transactions are often certified by notaries or other professionals subject to AML legislation, if enforced or expected to be enforced. The extent to which this happens, or the mechanisms by which corrupt Chinese or Russian people purchase property in major Western cities, is not well understood.

More likely is the purchase in cash of high-value assets such as cars, boats or jewels which are a quite common consumption pattern for organised criminals and corrupt officers. In various countries, it is still possible to buy a car entirely in cash. In some, car shops should be registered as high-value dealers. But in most they should not. In Germany, for example, according to a survey published by the association of untied (multi-brand) car dealers (BVfK), 67% of car transactions are done in cash.[49] And car shops often apply a discount in case of cash-payments (the so-called *Barzahler-Rabatt*—cash payers' discount).

Reducing Cash Use

Given the analysis so far, it is not surprising that one of the first measures implemented by governments to minimise the ML/TF risk is to reduce the use of cash in the legitimate economy. This means putting rules and thresholds on cash use and fostering the adoption of alternative (and more traceable) means of payments. Three types of threshold on cash-use can be identified in those countries that have controls:

- On purchases, that is, maximum amounts which could be purchased through cash
- On cross-border transfers, that is, maximum amounts of cash which could be brought into/outside a country
- On banknotes denomination, that is, what is the highest denomination note in circulation

Limits on Cash Purchases

The set of rules on cash purchase limits largely vary worldwide—and even within the EU (see below). The different practices range from cash thresholds on all types of goods to thresholds on certain types of goods; from maximum limits per day/month and per person to different thresholds depending on the type of consumer (e.g. resident versus non-resident, legal person vs natural person). Some countries have no thresholds at all, while others require businesses accepting large amounts of cash to report these transactions to the public authority or respond to the same AML obligations pending on banks or professionals.

In the European Union, all these scenarios can be found (see chart and map below). Italy, France, Belgium, Spain, Poland and other member states all have maximum thresholds for cash purchases, which range between 1,000 (e.g. in France, for French residents) and 15,000 euro (e.g. in Poland for all consumers or in Spain for non-residents). In Romania, cash payments are limited to 10,000 RON (about 2,300 euro) per person per day. In Germany, Austria, Slovenia and in some Baltic countries no limitations exist, while in Hungary they apply only if the transaction is made by legal persons.[50] However, it must be noted that in the whole EU, all traders in goods which receive payment in cash above 10,000 euro are subject to AML obligations (Directive 849/2015, Art. 2). But the number of STRs issued by this category is very low (Table 7.4).

In the UK, there is no limit for cash purchases. However, all merchants accepting cash payments of 15,000 euro or more (in single transaction or several linked instalments) should register as High-Value Dealers with HM Revenue and Customs, which has a light-touch regulatory regime.[51] In the United States, all trade or businesses who receive more than US$10,000 in cash in a single or related transactions must report to the Internal Revenue Service by filling the so-called IRS/FinCEN Form 8300. The obligation applies to a wide array of situations, including sale of goods, services, properties, rentals and loan payments. Only persons engaged in trade or

Table 7.4 Cash purchase limits across selected EU countries

Country	Cash limit (euro)	Note
Austria	No limit	
Belgium	3,000	
Bulgaria	5,000 (approx.)	Limit of 9,999 LEV
France	1,000	10,000 euro for non-residents
Germany	No limit	
Hungary	No limit	Limit of about 5,000 euro (1.5 million HUF) for legal persons
Italy	3,000	
The Netherlands	No limit	
Poland	15,000 (approx.)	Limit of 62,220 PLN
Romania	2,250 (approx.)	Limit of 10,000 RON per person per day
Slovenia	No limit	
Spain	2,500	15,000 euro for non-residents

Source: Authors' elaboration based on European Consumer Centre data

businesses should fill the 8300 form, while transactions among private individuals (e.g. the sale of a second-hand car to a private buyer) do not fall under this requirement.[52]

Cash limits also may change over time, following political or socio-economic pressure. For example, in France the maximum threshold for cash-purchase was lowered from 3,000 to 1,000 euro (for French residents) and from 15,000 to 10,000 euro (for non-residents like tourists) in March 2015, after the February attack to Charlie Hebdo, in a way to 'combat low-cost terrorists'.[53] Following the same *zeitgeist*, Germany has also attempted in early 2016 to introduce a limit on cash payments above 5000 euro. However, the proposal has met strong resistance by a wide variety of stakeholders including varied political parties, the German Bundesbank, academics and numerous trade associations—first of all, car dealers and the automotive industry.[54] The main reason argued by opponents was that reducing cash could also reduce data protection and privacy: as mentioned by a German MP 'Cash allows us to remain anonymous during day-to-day transactions. In a constitutional democracy, that is a freedom that has to be defended'.[55] In an opposite direction, in 2016 Italy has raised the maximum limit for cash-use from 1,000 euro (at that moment the lowest in the European Union) to 3,000 euro. This increase, which some authors condemned because of the risk it posed to fostering the underground economy and money laundering, was justified by the government as a 'Keynesian' measure to incentivise demand and spur consumption. Nevertheless, this measure has been accompanied with an obligation on merchants to adopt POS terminals in an attempt to increase the use of more traceable payments such as credit or debit cards.

Limits on Cash Transfers

In most jurisdictions, limitations exist in terms of maximum cash amounts which could be brought in and outside the country. When the value transferred is higher than this threshold, it usually has to be reported to the customs authority—and likely justified. If cash is not declared, it may be seized, and individuals can incur various sanctions including fines or detention. These requirements respond to FATF Recommendation 32 (*Cash couriers*), which was developed with the aim to prevent the physical cross-border transportation of currency by terrorists and other criminals.[56]

In the European Union, the limit is set by Regulation 1889/2005 and corresponds to €10,000, above which any natural person should declare this amount when entering or leaving the area. In December 2016, the Commission proposed also to extend currency reporting requirements to unaccompanied cash such as that sent in postal or freight consignments and to precious commodities such as gold, which often serve as 'quasi-cash'.[57] Since Regulation 1889/2005 adopts a minimum harmonisation approach, some EU member states (such as Belgium, France, Germany, Italy) go beyond what is required and apply the duty to declare also when leaving towards (or entering from) another EU country. On the opposite side, in other member states (such as Austria, Romania, the Netherlands) and in the UK, the obligation holds only for movements across the EU border.[58]

In the United States, as mentioned previously, the limit is set at 10,000 dollars by Title 31 section 5332 of the US Code. Whoever evades the currency reporting requirement can be prosecuted for a cash-smuggling offence.[59] To make prosecutions easier, it has to be proven only that the suspect intended to cross the border with the undeclared cash.

Limits on Banknote Denominations

The third limit which can be identified is that on notes' denominations—that is, the highest allowed banknote value. As mentioned, high-value notes are preferred by criminal organisations and terrorists as they ease the transportation and hoarding of illicit cash proceeds. Table 7.5 presents the highest denominations in selected major and widely accepted currencies.

Among most common currencies, the largest value note is the 1,000 Swiss franc bill, followed by the 500 euro note.[60] However, there are other banknotes in circulation with higher denominations, although most of them have been withdrawn (but are still legal tender). For example, the 1,000, 5,000 and

Table 7.5 Highest denomination banknotes in selected currencies

Country/Area	Currency	Highest denomination banknote	Value in Euro[a]
Euro area	Euro (€)	500[b]	500
UK	Pound (£)	50[c]	57.9
Switzerland	Swiss franc (Fr.)	1000	932.2
United States	US Dollar ($)	100	93.9
Japan	Yen (¥)	10,000	87
China	Yuan (¥)	100	13.7
Canada	Canadian Dollar ($)	100	70.5
Australia	Australian Dollar ($)	100	70.9
India	Rupee (₹)	1000[d]	13.8
Mexico	Peso ($)	1000	42,8
Russia	Ruble (₹)	5000	78.5

Source: Authors' elaboration on various sources
[a]Exchange rate of 19 January 2017
[b]Discontinued by the end of 2018. Next highest denomination is the 200 euro bill
[c]Some banks in Scotland and Northern Ireland produce 100-pound banknotes that are not technically legal tender but are nonetheless widely accepted
[d]Discontinued since November, 2016 by the Indian Government (see below)

10,000 US dollar bills (discontinued in 1969, and almost disappeared) and the Canadian 1,000 dollar (equivalent to about 700 euro, not printed since 2000). The Singapore 10,000 dollar bill (about 6,580 euro at current rate) was discontinued in 2014 for AML reasons, but can still be found, while the 1,000 dollar note (658 euro) is still printed. This means that the largest bill in circulation is the Brunei 10,000 dollar (US 6,570 dollars) bill—although that seems to be restricted to the shopping habits of the super-rich.

The Anomaly of the 500 Euro Banknote

In May 2016, the ECB decided to permanently discontinue the production and issuance of €500 banknote by the end of 2018. The measure responded to 'concerns that the banknote could facilitate illicit activities'[61]and followed various studies and reports, already mentioned in this chapter.[62] The 500 euro note means much value in a single banknote of a reliable (and easily exchangeable) currency: the perfect bill to be exploited for cash smuggling purposes by drug trafficking organisations, or as a store of value for large cash illicit proceeds, both in Europe and abroad. According to a 2009 estimate by the UK Serious Organised Crime Agency (now National Crime Agency), 90% of 500 euro notes in circulation in the UK was held by criminal organisations or was used for criminal purposes.[63] And numerous are the cases of 500 euro notes seized in police operations in Latin America or the US.

The withdrawal of this banknote will partially address the problem. But at the moment of the ECB decision, 280 billion euros (equivalent to almost 25% of all outstanding euro value) were still in circulation in this denomination. Therefore the ECB made clear that the 500 banknote will remain indefinitely legal tender. The question then is whether criminals will really feel that they need to exchange their holdings into smaller bills, or whether they could keep the 500 euro for their illegal transactions (e.g. to buy drug shipments or firearms) or as stores of value.

Seizing Cash

Due to the absence of harmonised and centralised data, it is difficult to determine how many assets, and of what types, are seized in Europe and abroad. A recent exploratory analysis produced by Transcrime in 2015 on several EU MS revealed that cash (and other movable assets such as bank deposits) represents the greatest part of seized and confiscated goods in Finland (62.9%), France (96.2%), Ireland (72.4%) and Spain (49.9%). In Italy they represent up to 33%, but real estate properties are more numerous.[64] In the UK, no updated figures are available, although according to the analysis of a Joint Asset Recovery Database sample, cash seems to be a fairly commonly recovered asset.[65]

In addition to any hypothetical impact of AML measures themselves making it more difficult to deposit and move cash, the reason behind these figures could be related to the key role played by cash in the illicit economy: it is more frequently seized because some criminals may prefer to keep dirty proceeds in banknotes than laundering it via real estate or through businesses. But this can be only part of the story. It could be argued that cash is easier to seize than other goods: the research evidence does not tell us how much of it is simply found during a police search of a suspect's house or of a vehicle. For example, though this may reflect long-term surveillance, in March 2007 Mexican police seized approximately US $207 million in cash from the house of a drug trafficker—held in various currencies including US and Canadian dollars, euro, Mexican pesos, yen, Chinese yuan and Traveller's cheques—one of the biggest cash seizures in history.[66] If this value had been held in other type of assets, it would have been harder to trace and recover it.

The third reason is that cash is easier to manage once seized, and in many countries, the authorities may not be geared up for the costs and difficulties of non-cash asset management.[67] Forfeited real estate has substantial management expenses (including maintenance and surveillance) and may involve third-party claims; the same for vehicles while even higher are the costs of managing seized businesses (e.g. judicial administrators' fees, workers' salaries, interest on business debts). Instead, seized cash could be easily placed in a bank account or—depending on the national legislation—kept by the police (as part of the 'gain') or transferred to special public funds used for various purposes.[68]

These practices may bolster the 'policing for profit' debate, raising the suspicion that police investigations and seizures could be cash rather than harm oriented—because the former is easier, cheaper and thus more profitable.[69] But we raise another question: what would happen to asset recovery if criminals shift from cash to other goods and laundering methods?

Policy and Research Implications

In Summary

Cash is appreciated by criminals for ML/TF purposes—and not only for that. Evidence suggests that, especially for very cash-intensive criminal activities such as drug trafficking, or for low-cost terrorists, it is the preferred method for moving illicit funds from one place to another (through cash-couriers). In cash smuggling, large-denomination bills like 500 euro play a key role. Cash is also very common for hoarding purposes, especially if there is no need (or possibility) to launder all the dirty money in other assets such as properties or companies. In this case, especially in an era of low interest rates and almost deflation, it would be convenient to store proceeds in cash—the only costs being the risk of theft, loss, fire, other physical degradation and police seizure.[70]

But data shows that cash is successful also in the legal economy. Despite the increasing use of alternative payment methods, such as credit cards, mobile payments or virtual currencies, banknotes still represent the preferred means of payment both in Europe and abroad, including the United States. This is particularly true for small-scale purchases, in certain sectors (e.g. food or retail), for certain age classes (very young or elderly people) and in certain areas—usually the poorest ones. However, it is also true of some of the seldom-arrested mega-rich who appear to enjoy 'flashing the cash': a problem for the luxury business if cash sales are restricted. In London and some other large cities, there is heavy demand for large amounts of cash from visiting or episodically domiciled Arabs, Russians, Kazakhs, and so on, which in theory can be awkward for salespeople when it exceeds the €15,000 cash reporting threshold.[71]

Implications for Criminals

What then would be the effect on money laundering if cash was legally restricted? And that on crime? This depends on actual and perceived enforcement levels. The impact would be heavier on 'petty' money laundering schemes, like those related to small-scale tax evasion which heavily relies on cash. Also affected would be traditional criminal organisations (including Italian mafias) which, according to wide evidence, seem to prefer to launder their money in cash-intensive businesses. A cash-less economy would make it harder to stay underground, despite some recent estimates arguing that abolishing banknotes would reduce the shadow economy only by 2–3%.[72] The impact of cash reduction on higher level ML schemes, such as those related to grand corruption, involving the use of complex corporate structures and off-shore jurisdictions, would be likely to be less significant—despite the fact these typologies also require, at some stage, some cashing out or cash smuggling.

There has been a trend in some Scandinavian countries towards a cash-less society, but this is a very small proportion of the international crime scene and even if it was to become a more general trend, it is implausible that, without cash, profit-driven crime will disappear. Displacement effects will occur at various levels. For example, the termination of 500 euro banknotes could lead criminals to adopt, for cash-smuggling or hoarding purposes, alternative high-value notes such as the 1,000 Swiss franc or the 200 euro bill. Or they may switch to smaller notes, just changing smuggling habits and techniques—which could become more costly because, for example, a higher number of couriers should be employed to transfer the same value, generating some social redistribution of the proceeds of crime. It cannot even be excluded that criminals decide to keep the 'old' 500 euro bills for their own illegal transactions (e.g. on the wholesale drug market) or as stores of value—at the end these banknotes will remain legal tender and they would keep their value, though use in the licit economy might generate even more suspicion than at present.[73]

Cash restriction would modify the nature of illegal markets, increasing barter, for example, exchanging drugs for firearms or other assets. And this could reshape criminal networks and partnerships. The trend towards virtual marketplaces, such as the dark-web, and virtual currencies, would accelerate. And companies could be used more frequently for 'laundering the product' and for providing a legitimate façade to (certain) illicit goods which could be then sold on legal markets.

Finally, as already noted by some authors, the reduction of cash could lead criminal groups, following new opportunities, to displace from traditional (and cash-intensive) criminal activities to cybercrimes, including 'old crimes in new bottles'.[74]

Implications for Policymakers

Considering its success in the legal economy, any cash restrictions would heavily affect not only criminals' but also consumers' behaviour. Due to a lack of good data, it would be difficult to assess the extent of this impact. Looking at consumer survey statistics, it can be hypothesised that the most affected categories would be those which cannot have ready access to alternative payment instruments—therefore the very young, the elderly and the people in poorest and less-developed areas, notwithstanding regulations which guarantee minimum access.

But the opposition in some EU countries against the proposal to introduce cash purchase limits suggests that cash-oriented interventions would somehow affect everybody's life—and personal freedom. Also when not handling the proceeds of drug trafficking or tax evasion, and even in the perimeter of a perfectly legitimate transaction, consumers would like to keep private what they buy or whom they pay. When paying, everybody has somebody to hide from—including targeted ads, customer profiling agencies and marketing crawlers. The anonymity of cash is still considered the best way to defend this freedom, especially if state and/or corporate personal data protection systems and rules are either inadequate or perceived to be so.

All these issues should be taken into account by policymakers before calling for the abolition or heavier restriction of cash for AML/CFT purposes. Not the least of these is that there would have to be some very good reasons to believe that these cash controls would have a greater impact than others, whose effectiveness in crime reduction have been heavily critiqued.[75] A set of reasonable and very specific measures could be the following:

(1) The discontinuation of 'unnecessarily' high-denomination notes: but are 200 euro banknotes really necessary? The de facto maximum note in the UK is £50.
(2) The reduction of cash purchase limits could make both purchasing drugs and laundering harder, but it seems odd that there is no *harmonisation* of these limits, especially in the European Union where they range from 1,000 euro to no upper limits at all. There is no evidence that there has been a displacement effect of ML/TF activities across countries—but unless the subsidiary principle is applied, current variations are merely an expression of historical preferences.
(3) A better enforcement of already existing instruments—for example, in the EU the AML obligations which apply to all traders in goods above the €10,000 cash payment threshold (Directive 849/2015, Art. 2).

(4) The introduction of incentives, for both consumers and merchants, to abandon cash in favour of alternative (and more traceable) payment instruments. For example, the rate of POS diffusion could much increase if POS fees and commissions paid by merchants were lowered—but this would mean banks and other financial intermediaries being ready to accept a significant reduction of their intermediation profits. More favourable conditions for buyers could help, like the introduction of discounts for those using non-cash instruments (while now instead *Barzahler-Rabatt* discounts favouring those who pay cash are more frequent).
(5) The shift to electronic payments should be accompanied by stricter rules on personal data protection, in order that consumers could keep their freedom and privacy also when using credit cards or other traceable payments.

None of these measures is easy to implement. Even the cut of high-denomination notes, if not adequately planned, could provoke unexpected negative consequences on the economy. On 8 November 2016, the Indian Government suddenly announced the withdrawal of 500 and 1,000 Rupee banknotes in an attempt to combat corruption, underground economy and terrorism. Fifty days were left for people to exchange the bills of this denomination in their possession in other banknotes. However, the measure resulted in a severe shortage of cash which had a significant short-term negative impact on GDP and consumption (without taking into account the problems related to the long queues outside banks and currency exchange agencies). Are government willing to pay such a price for combating crime and money laundering?

Implications for Researchers

A more realistic assessment of the future impact of a cash restriction on consumers and criminals would require a better understanding of contemporary cash habits. Too little is known about how, by whom, for what purpose is cash currently used in Europe and abroad. Surveys should be updated and expanded.[76] And alternative measurement methods—such as the tracking and tracing of banknote samples—should be explored.

Also the knowledge of what criminals do with cash could be improved. Money laundering research could much benefit from a better understanding of criminals' 'numismatic' preferences—what denominations and currencies they prefer, where do they exchange bills, how they store and transfer them. Most criminological studies addressing the cash-issue focus on drug trafficking: what about other offences, such as human smuggling which has received even less systematic attention? As regards the awareness of AML obligations by traders in goods (receiving cash-payments): what is their level of customer due diligence? And what do we know about their efforts in identifying 'suspicious behaviour' and reporting suspicious transactions? Cash is one of the oldest means of payment, but it is one of those about which our knowledge remains poorest.

Notes

1. Intended here to denote the amount of banknotes and coins in circulation: one of the two components, with bank sight deposits, of the narrow money supply (M1).
2. Europol, 'Why is Cash Still King? A Strategic Report on the Use of Cash by Criminal Groups as a Facilitator for Money Laundering' (2015) <www.europol.europa.eu/publications-documents/why-cash-still-king-strategic-report-use-of-cash-criminal-groups-facilitator-for-money-laundering> accessed 21 March 2017.
3. Obviously, there have been experiments in marking notes as part of undercover operations, and following the £26.5 million robbery from the (Irish) Northern Bank, the bank went as far as changing the design of the Northern Irish notes to prevent them from helping the terrorist cause. See Darwin Templeton, 'The Provos Got So Much Cash From Northern Bank Heist They Could Not Handle It' *Belfast Telegraph* (Belfast, 15 December 2014) <www.belfasttelegraph.co.uk/news/northern-ireland/the-provos-got-so-much-cash-from-northern-bank-heist-they-could-not-handle-it-30833641.html> accessed 21 March 2017.
4. European Central Bank, 'The Use of Euro Banknotes. Results of Two Surveys Among Households and Firms' (2011) 82 <www.ecb.europa.eu/pub/pdf/other/art2_mb201104en_pp79-90en.pdf> accessed 21 March 2017.
5. Heike Mai, 'Cash, Freedom and Crime: Use and Impact of Cash in a World Going Digital' (2016) Deutsche Bank Research <www.dbresearch.com/PROD/DBR_INTERNET_EN-PROD/PROD0000000000427044/Cash,_freedom_and _crime%3 A_Use_and_impact_of_cash_in.pdf> accessed 21 March 2017; Alessia Cassetta, Alberto Di Filippo, and Valeria Roversi, *L'Utilizzo delle Banconote di Taglio Elevato Come Potenziale Strumento di Riciclaggio: Lo Studio del 2011 con una Nota di Aggiornamento* (Banca d'Italia Quaderni dell'Antiriciclaggio 2016).

6. Federal Reserve Bank of San Francisco, 'The State of Cash: Preliminary Findings from the 2015 Diary of Consumer Payment Choice' Fednotes (2016) 2 <www.frbsf.org/cash/publications/fed-notes/2016/november/state-of-cash-2015-diary-consumer-payment-choice> accessed 15 January 2017.
7. Cassetta, Di Filippo, and Roversi (n 5) 23.
8. European Central Bank (n 4). According to another survey carried out in Germany, this share can be even lower, around 5%. See Deutsche Bundesbank, 'Where Does the Cash in Your Wallet Come From?' (2010) <www.bundesbank.de/Redaktion/EN/Downloads/Publications/Studies/cash_management_2010_where_does_the_cash_in_your_wallet_come_from.html> accessed 9 January 2017.
9. European Central Bank, 'Consumer Cash Usage. A Cross-Country Comparison With Payment Diary Survey Data' (2014) ECB Working Paper Series, no 1685 <www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1685.pdf> accessed 28 February 2017.
10. Federal Reserve Bank of San Francisco (n 6).
11. Guerino Ardizzi and others, 'Measuring the Underground Economy with the Currency Demand Approach: A Reinterpretation of the Methodology, With an Application to Italy' (2014) 60(4) Review of Income and Wealth 747; Michele Riccardi, Riccardo Milani, and Diana Camerini, 'Assessing the Risk of Money Laundering in Italy' in Ernesto Savona and Michele Riccardi (eds), *Assessing the Risk of Money Laundering in Europe: Final Report of Project IARM* (Transcrime-Università Cattolica Sacro Cuore 2017).
12. European Central Bank (n 9).
13. European Central Bank (n 4) 89.
14. Cassetta, Di Filippo, and Roversi (n 5). This might be viewed as an irrational reaction and/or fear of systemic bank failure.
15. Friedrich Schneider, Konrad Raczkowski, and Bogdan Mróz, 'Shadow Economy and Tax Evasion in the EU' (2015) 18(1) Journal of Money Laundering Control 34.
16. Riccardi, Milani, and Camerini (n 11).
17. Richard Wright and others, 'Less Cash, Less Crime: Evidence from the Electronic Benefit Transfer Program' (2014) IZA Discussion Paper Series <http://ftp.iza.org/dp8402.pdf> accessed 20 January 2017. We note that it reduces the expected reward per mugging, and so on.
18. Europol (n 2) 11.
19. Ibid.; Melvin Soudijn and Peter Reuter, 'Cash and Carry: The High Cost of Currency Smuggling in the Drug Trade' (2016) 66(3) Crime, Law and Social Change 271.
20. Douglas Farah, 'Money Laundering and Bulk Cash Smuggling: Challenges for the Merida Initiative' (2011) 158 <www.wilsoncenter.org/publication/money-laundering-and-bulk-cash-smuggling-challenges-for-the-us-mexico-border> accessed 28 February 2017.

21. Soudijn and Reuter (n 19); Petrus C van Duyne and Michael Levi, *Drugs and Money: Managing the Drug Trade and Crime-Money in Europe* (Routledge 2005).
22. Farah (n 20) 155.
23. UNODC, *World Drug Report 2016* (United Nations 2016); Stijn Hoorens and David Décary Hétu, 'Dark Web Likely Isn't Fuelling International Drug Sales' *The RAND Blog* <www.rand.org/blog/2016/09/dark-web-likely-isnt-fuelling-international-drug-sales.html> accessed 21 March 2017. For discussion of ML and virtual currencies, see Chap. 8 (Chambers-Jones), and for the regulation of virtual currencies see Chap. 9 (Egan) in this collection.
24. Maurizio Lisciandra, 'Proceeds From Extortions: The Case of Italian Organised Crime Groups' (2014) 15 Global Crime 93; Patricio Rodrigo Estevez-Soto, 'Factors Associated With Extortion Compliance in Mexico: Who Pays and Why?' American Society of Criminology Conference (New Orleans, November 2016).
25. European Central Bank (n 4) 89.
26. For example UNODC, *Corruption in the Western Balkans* (United Nations 2011); Giang Ly Isenring, Giulia Mugellini, and Martin Killias, 'Assessing the Areas of Vulnerability for Swiss Firms in International Business Activities: The Swiss International Corruption Survey' (Universität St. Gallen and KRC 2016).
27. In the European Union, threshold is set at 10,000 euro <http://ec.europa.eu/taxation_customs/individuals/cash-controls_en> accessed 28 February 2017; as regards the United States, threshold is set at US$10,000 <www.ice.gov/bulk-cash-smuggling-center/faq> accessed 28 February 2017. See below for more details.
28. Soudijn and Reuter (n 19) 3.
29. Financial Acion Task Force, *Money Laundering Through the Physical Transportation of Cash* (2015) 39.
30. *Regalado Cuellar v United States* 553 US 550 (2008). See also David Stout, 'Court Rules on Money Laundering' *The New York Times* (Washington, 3 June 2008) <www.nytimes.com/2008/06/03/washington/02cnd-scotus.html> accessed 21 March 2017.
31. 18 USC s 1956.
32. Cited in Farah (n 20) 45.
33. Ibid. 160.
34. Soudijn and Reuter (n 19).
35. FATF (n 29) 56.
36. Ibid. 54.
37. Ibid. 61.
38. Farah (n 20) 158.
39. Soudijn and Reuter (n 19).
40. Ibid. 9.

41. For a review on the issue of criminal infiltration/investment in legal businesses see Ernesto Savona, Michele Riccardi and Giulia Berlusconi, *Organised Crime in European Businesses* (Routledge 2016); Michael Levi, 'Money for Crime and Money from Crime: Financing Crime and Laundering Crime Proceeds' (2015) 21(2) European Journal on Criminal Policy and Research 275.
42. Riccardi, Milani, and Camerini (n 11).
43. Nicholas Gilmour and Nick Ridley, 'Everyday Vulnerabilities. Money Laundering Through Cash Intensive Businesses' (2015) 18(3) Journal of Money Laundering Control 293; Transcrime, *Gli Investimenti delle Mafie* (Transcrime—Università degli Studi di Trento 2013) <www.transcrime.it/pubblicazioni/progetto-pon-sicurezza-2007-2013/> accessed 28 February 2017.
44. Michele Riccardi, Cristina Soriani, and Valentina Giampietri, 'Mafia Infiltration in Legitimate Companies in Italy' in Ernesto Savona, Michele Riccardi, and Giulia Berlusconi (eds), *Organised Crime in European Businesses* (Routledge 2016) 119; Michele Riccardi, 'When Criminals Invest in Businesses: Are We Looking in the Right Direction? An Exploratory Analysis of Companies Controlled by Mafias' in Stefano Caneppele and Francesco Calderoni (eds), *Organised Crime, Corruption and Crime Prevention* (Springer 2014).
45. Riccardi, Milani, and Camerini (n 11): the ML risk is estimated by author combining a variety of risk factors, all operationalised into proxies, such as connections with offshore jurisdictions, opacity of business structure, level of organised crime infiltration and of tax evasion and, indeed, cash intensity.
46. See for a review Savona, Riccardi, and Berlusconi (n 44) and Levi (n 41).
47. Joras Ferwerda and Edward Kleemans, 'Assessing the Risk of Money Laundering in the Netherlands' in Ernesto Savona and Michele Riccardi (eds), *Assessing the Risk of Money Laundering in Europe: Final Report of Project IARM* (Transcrime-Università Cattolica Sacro Cuore 2017).
48. See <www.government.nl/latest/news/2011/02/21/public-administration-act-bibob-will-be-extended-to-intensify-the-fight-against-organized-crime> accessed 28 February 2017.
49. BVfK, 'Position Paper to the German Ministry of Finance' (2016) <www.bvfk.de/wp-content/uploads/2016/02/Positionspapier-des-BVfK-zur-Bargeldobergrenze-2016-02-151.pdf> accessed 21 March 2017. Unfortunately no details are available on how this figure—which is very surprising—is calculated. However, it likely applies to the segment of used or re-imported cars sold from businesses to consumers by multi-brand car dealers.
50. European Consumer Centre, 'Cash Payment Limitations' (2017) <www.evz.de/en/consumer-topics/buying-goods-and-services/shopping-in-the-eu/cash-payment-limitations/> accessed 28 February 2017.
51. UK Government, 'Guidance—Money Laundering Regulations: High Value Dealer Registration' (2013) <www.gov.uk/guidance/money-laundering-regulations-high-value-dealer-registration> accessed 28 February 2017.

52. See <http://www.irs.gov/businesses/small-businesses-self-employed/irs-form-8300-reference-guide#required> accessed 28 February 2017; <www.irs.gov/pub/irs-pdf/f8300.pdf> accessed 28 February 2017.
53. Interview to France's Finance Minister Michel Sapin, cited in Ingrid Melander, 'France Steps Up Monitoring of Cash Payments to Fight 'Low-Cost Terrorism'' *Reuters* (18 March 2015) <www.reuters.com/article/us-france-security-financing-idUSKBN0ME14720150318> accessed 28 February 2017.
54. Philip Oltermann, 'German Plan to Impose Limit on Cash Transactions Met with Fierce Resistance' *The Guardian* (London, 8 February 2016); BVfK (n 49).
55. "Bargeld ist die Möglichkeit zur Anonymität bei Alltagsgeschäften und diese Freiheit muss in einem Rechtsstaat verteidigt warden" from a Tweet on 5 February 2016 by Konstantin Von Notz, MP of the German Bundestag for the green party.
56. Financial Action Task Force, 'International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation: The FATF Recommendations (2012)' <www.fatf-gafi.org/media/fatf/documents/recommendations/pdfs/FATF_Recommendations.pdf> accessed 21 March 2017.
57. See European Commission, 'What Are the Rules?' <http://ec.europa.eu/taxation_customs/individuals/cash-controls/what-are-rules_en> accessed 28 February 2017.
58. European Consumer Centre (n 50).
59. See US Immigration and Customs Enforcement, 'FAQ: Bulk Cash Smuggling' <www.ice.gov/bulk-cash-smuggling-center/faq> accessed 28 February 2017.
60. To be noted that when the 500 euro bill was issued, only two EU member states had higher denominations in their own currencies: Germany (with the 500 Deutsche Mark bill) and Latvia.
61. European Central Bank, 'ECB Ends Production and Issuance of €500 Banknote' *ECB Press Releases* (4 May 2016) <www.ecb.europa.eu/press/pr/date/2016/html/pr160504.en.html> accessed 28 February 2017.
62. Among them, the already mentioned Cassetta, Di Filippo, and Roversi (n 5); Europol (n 2); Soudijn and Reuter (n 19); Farah (n 20); FATF (n 29).
63. Dominic Casciani, 'Organised Crime Fears Cause Ban on 500 Euro Sales' *BBC News* (London, 13 May 2010) <http://news.bbc.co.uk/1/hi/uk/8678886.stm> accessed 21 March 2017. Mentioned also in Cassetta, Di Filippo, and Roversi (n 5).
64. These percentages refer to the number of movable assets (including cash seizures) out of the total number of confiscated goods. Obviously in terms of value these figures may be lower, as a single property could be worth several millions euro. But data on assets' values in most countries are lacking or are questionable. Depending on the country, they refer to different stages of the asset recovery process, since there are variations in asset recovery processes and

predicate offences. For more details, see Priscilla Standridge and Michele Riccardi, 'A Comparative Analysis Among the Seven OCP Countries' in Ernesto Savona and Michele Riccardi (eds), *From Illegal Markets to Legitimate Businesses: The Portfolio of Organised Crime in Europe. Final Report of Project OCP* (Transcrime—Università degli Studi di Trento 2015) 249.

65. Richard Dubourg and Stephen Prichard (eds), 'Organised Crime: Revenues, Economic and Social Costs, and Criminal Assets Available for Seizure' (2008) 74 <www.gov.uk/government/uploads/system/uploads/attachment_data/file/99094/9886.pdf> accessed 28 February 2017; David Wall and Yulia Chistyakova, 'United Kingdom' in Ernesto Savona and Michele Riccardi (eds), *From Illegal Markets to Legitimate Businesses: The Portfolio of Organised Crime in Europe. Final Report of Project OCP* (Transcrime—Università degli Studi di Trento 2015) 282.
66. Farah (n 20).
67. Standridge and Riccardi (n 64).
68. For example in Italy cash is transferred to FUG—Fondo Unico Giustizia, which 50% is held as bank deposit, and the other 50% is used for social purposes or to finance LEAs activities. In the UK, money recovered from criminals' assets is shared among different public authorities as part of the 'Asset Recovery Incentivisation Scheme'. For a review of management practices of seized cash in Europe see EU ARO (Asset Recovery Office) Platform Subgroup on Asset Management, 'Draft Internal Report' (2015). For further discussion, see Chap. 29 (Vettori) in this collection.
69. On this debate see the recent article 'Police in Britain Want to Keep More of the Loot They Confiscate' *The Economist* (London, 19 January 2017) <www.economist.com/news/britain/21715069-others-worry-it-would-tempt-them-pursue-rich-crooks-not-harmful-ones-police-britain> accessed 21 March 2017.
70. According to Roberto Escobar, Pablo's brother, the Medellin Cartel was losing about 10% of the generated cash each year due to physical degradation. See Roberto Escobar and David Fisher, *The Accountant's Story* (Grand Central Publishing 2009) 5.
71. Interviews with second author.
72. Heike Mai (n 5).
73. Bankers inform the second author that unless there is a good business reason, they regard the deposit of €500 notes with considerable suspicion and would be inclined to make a SAR.
74. Michael Levi 'Assessing the Trends, Scale and Nature of Economic Cybercrimes' (2017) 67(1) Crime, Law and Social Change 3.
75. Terrence Halliday, Michael Levi, and Peter Reuter, 'Global Surveillance of Dirty Money: Assessing Assessments of Regimes To Control Money-

Laundering and Combat the Financing of Terrorism' (2014) <www.lexglobal.org/files/Report_Global%20Surveillance%20of%20Dirty%20Money%201.30.2014.pdf> accessed 28 February 2017.

76. The last survey at EU level is dated 2011 (but on 2008 data). A 2014 ECB report (n 9) compared payment diary surveys of seven countries (Canada, Australia, US, Austria, France, Germany and the Netherlands) but based on data from 2009 to 2012. Cash payment surveys in Eastern European countries are almost absent.

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