The Bitcoin trader

a facilitating role in the cash out of criminal proceeds

Introduction

In 1998, scientist David Chaum was the first person to attempt to combine encryption (cryptography) with electronic currency. Bitcoin was the first real crypto-currency and was released for the first time in January 2009. As of 2011, the interest in Bitcoin significantly increased. Given, among other things, the anonymous nature of Bitcoin, Bitcoin became a popular means of payment on the dark web. Criminals, however, soon encountered a lack of anonymity in the cash out. The moment the Bitcoins were converted to an electronic legal tender, the anonymity could no longer be guaranteed. The Bitcoin trader began to provide in the need for anonymity by purchasing Bitcoins against cash at an attractive commission fee. By doing so, the Bitcoin trader facilitates criminal customers and he could be guilty of the offence of money laundering. This document describes the role of the Bitcoin trader as facilitator in the cash out of criminal proceeds.

Methodology

The note 'The Bitcoin trader, a facilitating role in the cash out of criminal proceeds' is drawn up by the AMLC based on literature study, interviews with experts as well as on the basis of information and experiences from criminal investigations whereby underlying crime has been established.

Reader's guide

Part 1 first of all provides general information on the phenomenon of Bitcoin. It focuses on Bitcoin in general, the anonymity of Bitcoin, the link to the illegality with regard to Bitcoin and the so-called 'Bitcoin mixer'. Part 1 concludes with a description of the profile of a Bitcoin trader. Part 2 provides an overview of the recognised money laundering indicators regarding the Bitcoin trader, the Bitcoin mixer and the customer of the Bitcoin trader.

Part 1   Bitcoin and the Bitcoin trader

What is Bitcoin?

Bitcoin is an independent payment system with its own virtual coin, enabling users to directly engage in transactions with one another via internet without the intermediation of other parties, such as a bank. A Bitcoin is not made of nickel or silver, but consists of a small piece of encrypted computer code to which the market of supply and demand places a value in euros or another legal tender.

Bitcoins are not physically available but are digital units. As with euros, Bitcoins can also be divided into smaller units, thus enabling smaller transactions[1]. Bitcoins can be exchanged through the Bitcoin network. This makes it possible for Bitcoins to be used as a means of payment to settle economic transactions (goods and services). Apart from Bitcoin, there are also other virtual coins such as Litecoin and Peercoin. Bitcoin is the largest in turnover and users.

How does Bitcoin work?

To be able to pay with Bitcoins or to receive Bitcoins, you first need a Bitcoin address. This Bitcoin address is the public part of a key pair and can be shared with the trade partner. The private part (private key) of the key pair may not be shared and is to be stored with care. A Bitcoin address is comparable to a bank account number. A Bitcoin address has at least 27 and a maximum of 34 characters.

In practice, transferring Bitcoins means you enter the Bitcoin address of the receiving party (the payee), you fill in the amount of Bitcoins (the transaction amount) and click on 'send'. Next, all sorts of cryptographic operations take place to realise the transaction. Once you have transferred the Bitcoins, this cannot be undone. Upon sending the transaction, the user has the possibility to pay a voluntary 'fee'. By paying a fee, a transaction will be verified sooner.
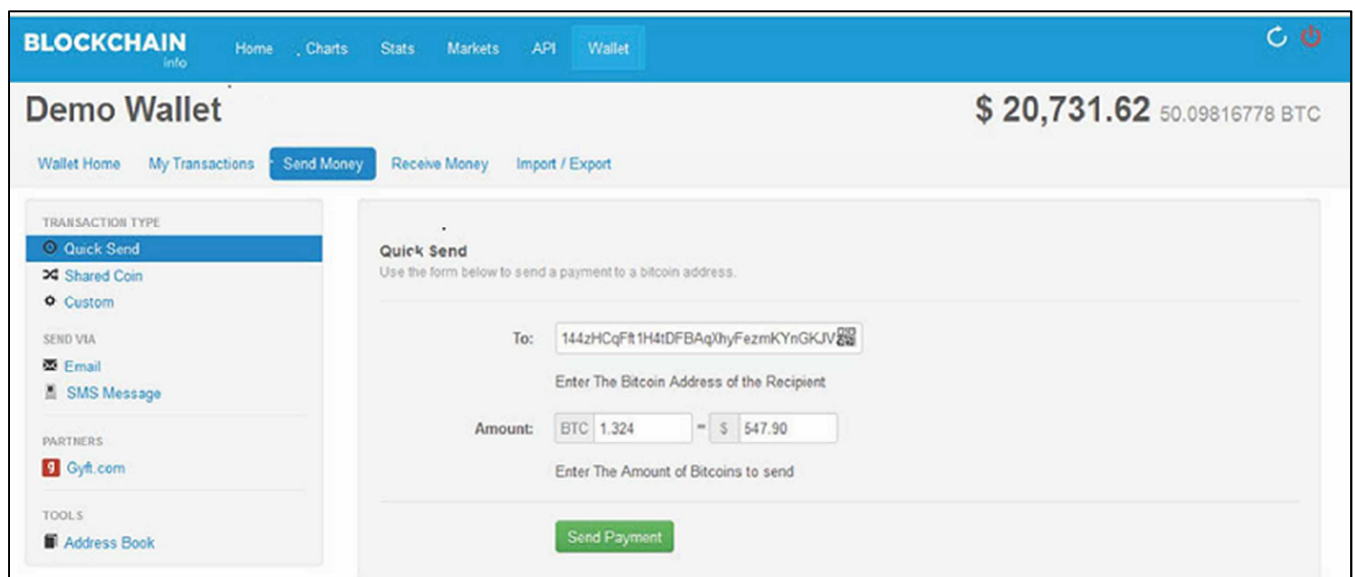

Figure 1 An example of a transfer of Bitcoins.[2]

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[1] The smallest amount is one Satoshi. One Bitcoin consists of one hundred million (100,000,00) Satoshi.

[2] B.H.M. Custers, J.J. Oerlemans and R.L.D. Pool 'Ransomware, cryptoware en het witwassen van losgeld in Bitcoins' ['Ransomware, cryptoware and money laundering ransom money in Bitcoins', *Strafblad [magazine]* 2016 (2), 15. The wallet shown in the figure is managed by the company Blockchain. Blockchain is the name of a popular Bitcoin wallet that you can download via their service, please see: https://blockchain.info/wallet/#/. In addition, Blockchain is the name for the data structure behind the Bitcoin network (the general ledger in which all transactions are recorded). Blockchain enables you to validate transactions without a central authority, to check accounts and to set up a payments system as it were, without a central authority but it being a decentralised system.

Your Bitcoins are in your Bitcoin wallet. You can download a wallet via www.bitcoin.org among others. You can generate one or more Bitcoin addresses in the wallet. A Bitcoin address and a wallet are not linked to an identity or name.

There are different types of Bitcoin wallets. The first version is the mobile wallet, an app on your mobile phone. Bitcoin Wallet is a well-known example. Second, is the software wallet, where the wallet software is installed on a computer. An example of this is Bitcoin Core. Furthermore, there is the online wallet, whereby you open an account with an online service. A frequently used online service (web wallet) is Blockchain.info. There is also the hardware wallet, which stores the private key in a separate, properly secured, hardware device. Finally, there is the paper wallet: you then have printed your private key and public key. An advantage of this is that it prevents your Bitcoins from falling in the wrong hands (think of cybercriminals). On the side of disadvantages, you could lose it and have no backup.[3]

There are two types of wallets, dynamic wallets and static wallets. In the dynamic wallet, following each transaction, a new Bitcoin address is made and stored in the wallet. A static wallet each time uses the same Bitcoin address for the transactions. The transactions done with a dynamic wallet are consequently more difficult to follow.

How do you get your Bitcoins?
You can get Bitcoins in different ways:
- You earn Bitcoins through "mining"
- You buy Bitcoins from exchangers, marketplaces (exchanges) or traders
- A person pays you in Bitcoins for goods delivered or services provided

Mining
The Bitcoin has to be virtually "dug". Every day a certain quantity is released to people who dig up Bitcoins ("mining"). New Bitcoins are tangled up in extremely difficult to crack algorithms. This cracking is done by using computing power. These "miners" not only unlock new Bitcoins and add these to the Bitcoin network, they also check Bitcoin transactions in the network. Anyone can mine by purchasing the necessary hardware, relevant software and, as one of the possibilities, to register with one of the mining pools. The number of Bitcoins you receive after your mining pool has dug up Bitcoins, depends on your contribution to the pool.

Purchase with cash or scriptural money
To buy, hold, sell and transfer Bitcoins, you use a wallet. The actual purchase of Bitcoins can take place by means of electronic money or cash. In order to purchase Bitcoins with electronic money, you need a credit in the form of a legal tender, for example a bank account number in euros with a bank[4] or online payment services such as PayPal.

With the use of your wallet and your credit you can buy Bitcoins. A first option is through a Bitcoin exchange office. Bitcoin exchange offices buy and sell Bitcoins on their own account and risk. They quote purchase prices and selling prices against which Bitcoins can be bought from them and sold to them, respectively. Examples of Bitcoin exchange offices include Bitonic, Coinvert, BTCdirect and Happycoins. The exchange costs vary at Bitonic between 0.1 and 1.5% of the transaction amount. This is the percentage difference (spread/fee) between purchase /selling price and the reference price/ market value of a Bitcoin. BTCDirect charges a fixed fee/ premium of 2% which is incorporated in the spread. In both cases, a reimbursement for the payment processor is included in the spread. Usually there is a small network fee payable for miners.

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[3] For further information on the paper wallet and how to create this, please go to http://www.coindesk.com/information/paper-wallet-tutorial/.

[4] Bitcoins can be purchased via, for example, an iDEAL transaction in euros. This is one of the easiest and cheapest ways of getting Bitcoins. However, there will then be a link between the Bitcoin address (exchange) and the bank account (banking institution) with associated identifying data.

Apart from Bitcoin exchange offices, there are also Bitcoin marketplaces.[5] These are trade fairs where parties can buy and sell Bitcoins between them. A marketplace is an intermediary, comparable to an online investment platform, that brings together supply and demand, provides a market (transactions, pricing) and stores the credits (money and Bitcoins) of the customers. For these marketplaces, also known as exchanges, you generally have to register and in some cases also provide identifying personal details. In many cases, this is done through derived identification by transferring an amount on the account of the exchange.

Popular Bitcoin exchanges include Kraken, CleverCoin (now part of Kraken) and Bitstamp. On all transactions from Bitcoin to euro and vice versa that the exchange facilitates, Kraken charges a fee of 0.26% and BitStamp a fee of 0.1% to 0.25% depending on the amount. A fee of 0.25% is used at BL3P, the marketplace of Bitonic. Third-party expenses (payment processing) are passed on separately.

There is also a (limited) number of platforms that does not work with orders, but mainly operates as intermediary or exchange and brings together supply and demand. A well-known example is LocalBitcoins.com.

It is possible to purchase Bitcoins with cash money via so-called Bitcoin ATMs. You can enter euro banknotes in the Bitcoin ATM, after which the equivalent value is deposited in your digital wallet. There are a couple of these in the Netherlands.[6]

Furthermore, it is possible to purchase Bitcoins against cash in person (face to face). People offer to purchase Bitcoins against cash on LocalBitcoins.com among others. The person quotes his price and limits (minimum and maximum transaction size) that he charges for (cash) purchases and sale.

Payment in Bitcoins for goods or services
You can also get Bitcoins by being paid in Bitcoins for delivering goods or providing services in economic transactions. You then get the countervalue of your goods delivered or services rendered in Bitcoins directly deposited in your wallet. These could, by the way, also be illegal goods and services.

If you offer goods or services through a webshop that accepts Bitcoins as an online tender, the transaction then takes places via a Payment Service Provider (PSP). Examples of a PSP include Bitpay, Qantani Payments and Mollie.

How do you sell your Bitcoins?
You can sell Bitcoins in different ways:
•	online at exchangers and exchanges;
•	in person (face-to-face) with a trader in cash.

When you sell to or via exchangers and exchanges, the profits will then, as a general rule, be deposited on a bank account.

If you want to sell your Bitcoins against cash, you can do this through a trader who advertises this on the internet. When selling Bitcoins to a trader against cash, it requires a physical meeting, where, at the time of the transaction, the Bitcoins transfer online from one wallet to the another wallet and the transfer of the money takes place. This poses a risk for both parties. In the event of larger transactions, parties can take measures to ensure that the transaction is carried out as agreed to beforehand. Use of straw men, the choice of (public) meeting points and securing the environment are examples.

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[5] In practice, both Bitcoin platforms as well as Bitcoin exchange offices refer to themselves as a 'Bitcoin Exchange', which could lead to confusion whether exchange means a platform or an exchange office.
[6] By the end of 2015, the number was estimated at seven, see: http://www.bitcoinspot.nl/wereldwijd-zijn-er-500bitcoin-pinautomaten-waar-staan-ze-in-nederland.html.

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Other ways of getting cash is indirect, where payment first takes place through a bank account, credit card or a prepaid card, after which cash withdrawals are possible.

The value of a Bitcoin

The price of Bitcoins is established by the value attributed to Bitcoins by the traders, through supply and demand on the exchanges. The total amount of Bitcoins that is issued is pre-determined at 21 million.[7][8] The value of the Bitcoin fluctuates considerably, as the figure below shows.
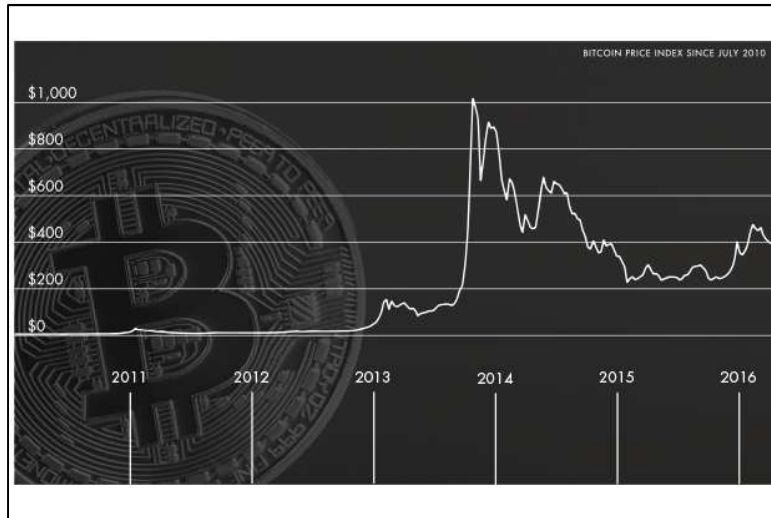

Figure 2 The rate of the Bitcoin from 2011 to 2016[9]

Www.coindesk.com shows the daily closing rates of the Bitcoins in dollars.[10]

Dutch laws and regulations with respect to Bitcoins

Bitcoins are virtual currency with which you can pay worldwide. Dutch case law does not consider Bitcoins to be money, but a means of exchange, such as silver and gold.[11] In the Netherlands, the Bitcoin, therefore, is not a legal tender.[12] Bitcoin, namely does not fall within the definition of (electronic) money within the meaning of the Financial Supervision Act. Virtual currency, such as the Bitcoin, does not fall within the scope of financial supervision legislation.[13]

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[7] This number will be reached by mid 2140. Until then, the Bitcoins will we issued in a phased manner. The vast majority of Bitcoins will already be in circulation by 2033. Source: B.H.M. Custers, J.J. Oerlemans and R.L.D. Pool 'Ransomware, cryptoware en het witwassen van losgeld in Bitcoins' ['Ransomware, cryptoware and money laundering ransom money in Bitcoins', *Strafblad [magazine]* 2016 (2), 15.

[8] The total value of all Bitcoins added together is about 10.8 billion dollars (9.6 billion euro), as stated by the Financieel Dagblad [Dutch Financial Times], see http://fd.nl/beurs/1155828/bitcoin-bereikt-marktwaarde-van-10-mrd. This is no record. The coin reached its first major peak at the end of 2013. The price of one Bitcoin then went up by more than 1,100 dollars and as a whole reached a market value of nearly 14 billion dollars, see

http://www.bankingreview.nl/artikel/29030/banken+verzekeraars/bitcoin-marktwaarde-overstijgt-10-miljard-dollar.

[9] http://www.spectator.co.uk/2016/03/is-bitcoin-a-safe-haven-against-mainstream-money-mayhem/.

[10] To convert to euros, you can make use of the 'Historical Exchange Rates' (http://www.excelclout.com/historical-exchange-rates-in-excel/).

[11] District Court Overijssel 14 May 2014, ECLI: ECLI:NL:RBOVE:2014:2667. The Dutch Court ruled that the "wallet" in which Bitcoins are being kept does not differ much from an ordinary bank account. However, this is not managed by a bank for example, but by the owner himself, as such these are not scriptural funds.

[12] Bitcoins do not appear physically. For this reason, the Bitcoins cannot be considered as cash, money in the physical form of currency. Nor are Bitcoins electronic money as there is no claim on an issuing entity.

[13] Letter from the Minister of Finance addressed to the President of the House of Commons dated 19 December 2013, reference: FM/20131939 U.

You have to indicate the value of your Bitcoins in Box 3 of the income tax return.[14] When you trade in Bitcoins on a commercial basis, like Bitcoin traders, you must account for the merits in your tax return. The European Court of Justice has ruled that Bitcoins may be traded exempt from VAT.[15] Transactions in goods and services that are paid for in Bitcoins, however, are not exempt from VAT.

Some advantages and disadvantages of the Bitcoin
Conducting a Bitcoin payment is practically free of charge and very quick. Each Bitcoin transaction has a unique code, which is not linked to an identity or name giving you thus anonymity. Moreover, there are no borders within the network, so it does not matter where the payer and receiver are located. This is different in the mainstream payments system in which entrepreneurs owe transaction fees for making (the process of) the payments as well for every international transfer and where bank account numbers with identifying information are linked to the transactions.

Reliability in legal tenders is achieved by the fact that the issue of money is done by a central bank, by supervision on the banks and the trust put in a bank due to supervision by the central bank (in the Netherlands this is De Nederlandsche Bank [The Dutch Bank] and for example the deposit guarantee scheme. This is not the case for Bitcoins. There is no authority that can offer suchlike reliance. If an online service for Bitcoin wallets goes bankrupt or gets hacked, the customers will have lost their Bitcoins.[16] The value of the Bitcoin strongly fluctuates, partly due to the relatively small scale of the coin, scandals and the (associated) trust of consumers. In this sense, the Bitcoin can be considered a risky investment. Sending Bitcoins is an irreversible process; when you have transferred too much or to a wrong address, this cannot be undone.[17]

Bitcoin and the anonymity
How anonymous is Bitcoin?
As described above, you make use of a wallet and one or more Bitcoin addresses when carrying out transactions. A wallet and an address are not linked to a name. To that extent you are trading as an anonymous person.

However, all Bitcoin transactions are visible and in principle traceable. All transactions that take place in the Bitcoin network, are namely stored in the so-called Blockchain. This public ledger stores, among other things, when a transaction has taken place, which Bitcoin addresses have been involved in this and the amount of the transaction.

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[14]
http://www.belastingdienst.nl/wps/wcm/connect/bldcontentnl/belastingdienst/prive/vermogen_en_aanmerkelijk_belang/vermogen/wat_zijn_uw_bezittingen_en_schulden/uw_bezittingen/overige_bezittingen/overige_bezittingen.
[15] http://fd.nl/ondernemen/1124130/bitcoin-is-een-valuta-en-dus-vrij-van-btw.
[16] Annual Report of the Nederlandse Bank [Dutch Bank] 2013, p. 84.
[17] B.H.M. Custers, J.J. Oerlemans and R.L.D. Pool 'Ransomware, cryptoware en het witwassen van losgeld in Bitcoins' ['Ransomware, cryptoware and money laundering ransom money in Bitcoins', *Strafblad [magazine]* 2016 (2), 15.
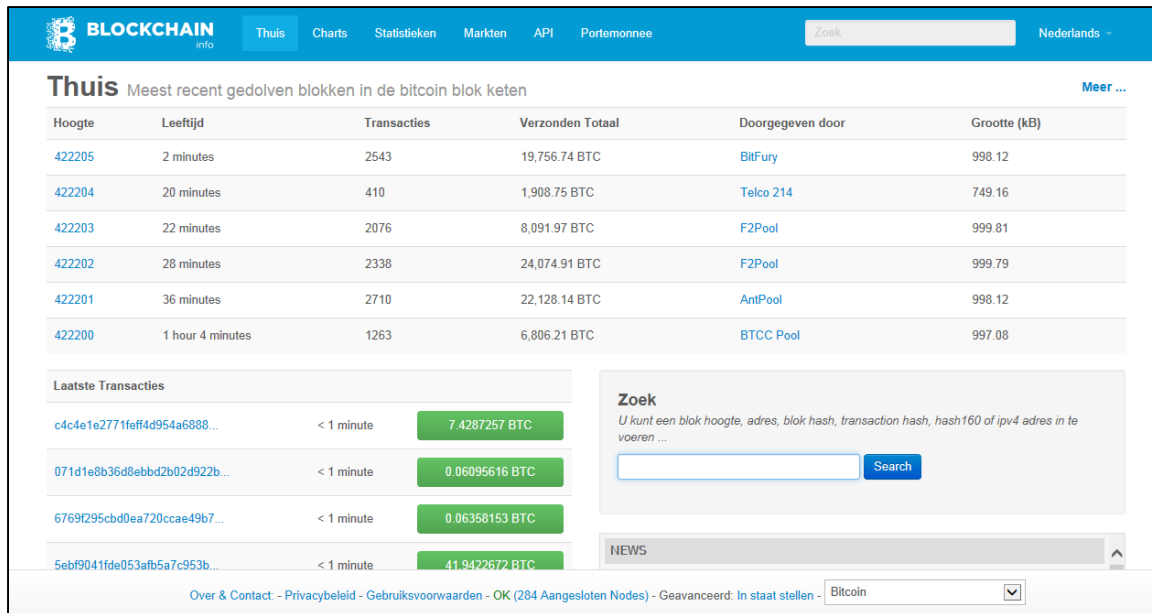
Figure 3 Screenshot of the Blockchain with actual Bitcoin transactions taking place worldwide

In the search screen on http://blockchain.info in the lower right corner of figure 3, you can enter a Bitcoin address. This then gives you an overview of the transactions that were done with that address. The Bitcoins are traceable via the Blockchain up and till the moment they once originated.

Via the website http://walletexplore.com, you can see the transactions that have been done with specific wallets. You can enter a Bitcoin address in the search field of this website. A message will then appear stating that this Bitcoin address is part of a certain wallet. To which you will get to see all the transactions that are done with that wallet. Via the button 'show wallet addresses' all Bitcoin addresses connected to this wallet become visible.

Figure 4 Screen shot of WalletExplorer which wallet is linked to a certain transaction

The above-mentioned tools, available through the internet, can therefore help you find out which transactions were done with the use of which Bitcoin address. In addition, you can find out which Bitcoin addresses belong to which wallet.

Possible breaches of the anonymity of Bitcoin.
A wallet and a Bitcoin address are not linked to a name of a natural person and thus provide anonymity. However, you have to download a wallet, purchase your Bitcoins, transactions are being initiated and registered via the internet and at some point you would be wanting to sell Bitcoins. In this part, traces can be left behind that eventually lead to the identity of the person behind the wallet, the addresses, the transactions and the cash flows.

You need a bank account to buy and sell Bitcoins through Bitcoin exchange offices or Bitcoin exchanges. Money is transferred from this account to the exchange office or the exchange in return for Bitcoins. When selling the Bitcoins, the exchange office or the exchange transfers the countervalue to

the bank account. The banking institution also has the identity of the account holder and moreover all (other) financial transactions. Combine the Bitcoin transactions and the financial transactions of the bank account and you will get a fairly good view of the length and the scope of the trade by the person concerned. The banking institution also has the duty to report unusual transactions.[18] Supervisor De Nederlandsche Bank (DNB) has warned banks and payment institutions in 2014 for integrity risks in virtual currency. DNB qualifies the present virtual currencies as products with a very high risk profile and, as such, an attractive currency as a link in a money laundering process.

Increasing anonymity
On internet websites you are advised to hide your IP address by making use of the Tor network.[19] By making use of the Tor network, the IP address of the user is rendered anonymous, making it not possible for the identity and the location of the person to be traced. Users of the Tor network can therefore surf the internet anonymously, the IP address is not logged. Your Bitcoin transactions cannot then be linked to your IP address and therefore not linked to you. Also the use of public Wi-Fi networks or the use of a VPN service provider [20] constitutes anonymity on the internet.

You can also generate more anonymity by making use of:
- a third party (straw man)
- a Bitcoin mixer
- Coin-Join
- a Bitcoin trader

The straw man
One or several third parties ('straw men') may be used for opening bank accounts, whether or not in name of those third persons or in name of a legal entity set up by those third persons (including foundations), which are used to buy Bitcoins or to receive its countervalue in euros when the Bitcoins are sold. Third parties can also be used to withdraw money from the account and to undertake the actual cash purchase transactions for the trader. This way a person can operate as an independent trader or a criminal organisation can change its Bitcoins without revealing his or its identity.

The Bitcoin mixer
A Bitcoin mixer pertains to online services that are called "mixing services". Bitcoins are exchanged against other Bitcoins against a payment of a commission to the mixer. That commission is a few percent of the total amount of Bitcoins (think of 2% or 3.5%). Because of the fact that Bitcoin transactions are kept in a public register (the Blockchain), the origin of the Bitcoins are therefore traceable. The Bitcoin mixer ensures that tracing the transactions is being blocked. The sole purpose of mixing services is to disguise the source of the origin of the Bitcoins. Some services, like BitLaundry, make no secret of this objective: "Secure Launder renders your bitcoins completely untraceable, even to the most persistent forensic investigator."

Mixing services often work via a Tor network, thus keeping the service provider and the customers anonymous. It also appears that mixing services mostly operate from jurisdictions where there is little or no judicial cooperation.[21] The mixer is constructed in such a way, that you do not get your own

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[18] Article 1 in conjunction with Article 16 of the Money Laundering and Terrorism Financing Act.

[19]Tor is short for the Onion Router, a special network that renders users anonymous. There is a browser available, the Tor Browser, giving you access to this network. Put simply, the Tor allows you to surf anonymously, visit blocked websites and surf to websites that end with .onion via Tor's own network. You cannot visit these websites via a regular browser. Source: http://www.nu.nl/internet/3852521/tor-diepe-web-en-zo-gebruik.html.

[20] A VPN tunnel is set up through a VPN service in order to encrypt and render your internet traffic anonymous. As a VPN service changes your IP address, you can then hide your geographical location or seemingly alter it.

[21] B.H.M . Custers, J.J. Oerlemans and R.L.D. Pool 'Ransomware, cryptoware en het witwassen van losgeld in Bitcoins' ['Ransomware, cryptoware and money laundering ransom money in Bitcoins', Strafblad [magazine] 2016 (2), 15 under reference to:. M. Möser, R. Böhme & D. Breuker, 'An inquiry into money laundering tools in the Bitcoin ecosystem', eCrime Researchers Summit (eCRS) 17-18 September 2013, p. 1-14 (http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6805780).

Bitcoins back, not even if you put your Bitcoins through the mixer in different portions. The Bitcoins you get back following the 'mixing', are Bitcoins originating from other persons who also make use of this service. These will be Bitcoins with another transaction history. By using the mixer, your transaction history (in nature, size, wallets and parties) cannot be seen nor reconstructed.[22] You can, however, see that the Bitcoins that have gone into the mixer, have in fact been in the mixer.[23]

The CoinJoin
A special way of mixing is mixing based on CoinJoin. CoinJoin is a form of mixing whereby several persons collectively make one Bitcoin transaction. Preferably, the amounts that are offered are of equal size to make it nearly impossible to relate the outputs of the transaction (the amounts for the beneficiaries) to the inputs of a transaction (the amounts that are offered).[24]

The Bitcoin trader
A Bitcoin trader is a person who buys and/or sells Bitcoins against cash on a commercial basis and for his own account and risk. Making use of the services of a Bitcoin trader, makes it possible to buy and sell Bitcoins without the need for an exchange office, an exchange, a bank account or electronic money. You do have to pay a higher commission to the trader than you would to a regular exchange. The trader charges between 7% and 15% of the transaction value, via an exchange this is between 0.25 - 0.30% (excluding payment processing fees).

The phenomenon 'Bitcoin trader' is discussed more extensively below.

Bitcoins and the illegality
Like other currency, you can use Bitcoins in various ways. First of all, you can use Bitcoins for (consumer) spending. This can be done online, through webshops that accept Bitcoins as a means of payment via a PSP, as well as in regular shops that accept Bitcoins. You can then pay by scanning a QR code or by holding your phone near NFC checkouts.[25] Moreover, you can invest in Bitcoins or speculate with Bitcoins.

According to the FBI, Bitcoins, however, also provide the opportunity to generate[26], transfer, launder money and steal from illegally obtained money with a certain degree of anonymity. A Bitcoin address and a wallet not being linked to an identity or name for example. This anonymous nature of the Bitcoin also appeals to criminal activities. A lot of trade on Darknet markets (including AgoraMarket, NucleusMarket, EvolutionMarket, MiddleEarthMarketplace, AlphaBay, Abraxis) can only be done using Bitcoins. These are marketplaces that offer criminal services and products. Think for example of drugs, weapons and child pornography but also for example stolen credit card information and services related to cybercrime. [27] Most of what is being offered on a dark web marketplace are illegal goods.[28] Also in the field of cybercrime, criminals frequently use Bitcoins.[29]

Cash has had a privileged status in illegal activities for a long time. The problem with cash is the logistics (storage, transport, size), however it has the charms of anonymity and the absence of a paper

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[22] D. Moore and T. Rid, 'Cryptopolitik and the Darknet. Encryption policy is becoming a crucial test of the values of liberal democracy in the twenty-first century' Survival, 58 (1): Global Politics and Strategy 2016, p. 17.
[23] For more information on the Bitcoin mixer, please see R.S. van Wegberg, J.J. Oerlemans and M.O. van Deventer, 'Bitcoin Money Laundering: Mixed Results? An explorative study on money laundering of cybercrime proceeds using Bitcoin'.
[24] For more information on CoinJoin mixing: https://bitcointalk.org/index.php?topic=279249.
[25] NFC (Near Field Communication) is a non-contact communication method. NFC is used, for example, when you pay contactless with your bank card.
[26] B.H.M. Custers, J.J. Oerlemans and R.L.D. Pool 'Ransomware, cryptoware en het witwassen van losgeld in Bitcoins' ['Ransomware, cryptoware and money laundering ransom money in Bitcoins', *Strafblad [magazine]* 2016 (2), 15.
[27] FEC Report 'Preventing the criminal use of New Payment Methods', from the FEC work group NPM, December 2015, p. 21.
[28] D. Moore and T. Rid, 'Cryptopolitik and the Darknet. Encryption policy is becoming a crucial test of the values of liberal democracy in the twenty-first century' Survival, 58 (1): Global Politics and Strategy 2016, p. 7-38.
[29] Report Europol 2015 "The Internet Organised Crime Threat Assessment (IOCTA), p. 12.

trail. The strength of the Bitcoin is the quick transfer of money. Amounts can be sent all over the world in just a few seconds. These are not accompanied by the names of the sender or recipient, thereby giving parties more anonymity than they would otherwise have with a mainstream banking transaction. Europol estimates that 40% of the intra-criminal scene takes place in Bitcoins.[30]

The Bitcoin trader as facilitator for money laundering.
A Bitcoin trader is a person who buys and/or sells Bitcoins against cash on a commercial basis, for his own account and risk. A Bitcoin trader is recognisable by the frequent Bitcoin transactions, the larger amounts of Bitcoins in his possession, the larger amounts of Bitcoins he exchanges at an exchange or exchange office, by the high revenues on his bank account originating from an exchange or exchange office, without any visible business activities being paid in Bitcoins.[31]

A vendor of Bitcoins and a Bitcoin trader come into contact via adverts of the Bitcoin trader on the 'surface' web among others, for example via localbitcoins.com, via forums on the dark web or on a Bitcoin platform. The vendor of the Bitcoins and the Bitcoin trader then meet somewhere in the physical world after which on-site a Bitcoin transaction takes place via the internet. Bitcoins are directly transferred by the vendor to a wallet of the trader who then hands the vendor the countervalue as agreed upon in cash. This concludes the transaction.

At localbitcoins.com, people (traders) offer their services to purchase Bitcoins against cash set within the rates specified by them (exchange rate) and limits (size of the transactions). The most frequently used minimum amount for the purchase against cash by a trader varies between EUR 2,000 to 5,000 for each transaction. The highest minimum rate on offer is EUR 30,000. Where a maximum is mentioned, the highest transaction size is EUR 200,000.

Bitcoin traders sell Bitcoins against cash on a similar basis. The most-frequently used limits vary between a minimum rate of EUR 500 and a maximum rate of EUR 10,000 with a peak of a maximum purchase in cash of EUR 50,000.[32] With the Bitcoins they received, criminals can pay their criminal activities whether or not for transactions on the dark web.

An average private individual or entrepreneur would not soon carry out such size transactions, against such high exchange costs and in cash.

A comparison at localbitcoins between traders who buy those Bitcoins against cash and those who sell the Bitcoins against cash at localbitcoins, demonstrated partly identical (fictitious) names of traders. Also traders who exclusively appear on buy ('quick buy') or sale ('quick sell') in cash ('In-person Cash') post a more extensive service. Because of the fact that traders both buy and sell Bitcoins against cash, this means that a check out is therefore not always necessary and part of the cash transactions consequently remain under the radar of exchangers, exchanges and banking institutions.

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[30] "Overall, Bitcoin is beginning to feature heavily in many EU law enforcement investigations, accounting for over 40% of all identified criminal-to-criminal payments." Report Europol 2015 "The Internet Organised Crime Threat Assessment (IOCTA), p. 46.

[31] A possible explanation for a suspect having a large volume of Bitcoins is him being a miner. However, mining is becoming less and less rewarding due to the power costs. The statement of the suspect then has to be supported by the energy bill of the suspect, the present hardware and software and his transaction data.

[32] Date reference localbitcoins.com 8 September 2016.

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Meeting preferences: public palce

..... All trades are private, no ID'S. We
can meet at any safe public place. I do a
lot of face to face trades without using
escrow, so my feedback does not represent
acctual number of trades which I made
with localbitcoins.com members. So if you
need reliable buyer, contact me. I am
looking for long-term partnerships as
well.
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Figure 5 A trader offers his services on localbitcoins.com

Search and detect investigations [33]reveal that the costs for making use of a Bitcoin trader are considerably higher as opposed to those for using an exchange office or an exchange. It is not uncommon for a trader to charge between 7% and 15% of the transaction value; among a regular exchange this figure is between 0.25 - 0.30%. Despite the high commission fees, there is a market for these traders.

Search and detect investigations also show that the traders, after having sold the Bitcoins to exchange offices or through exchanges, withdraw the money received on the bank account largely or fully in cash. This is how the trader, presumably, meets his own required cash enabling him to again purchase Bitcoins.[34]

Investigations also show that Bitcoin traders, by the profile they demonstrate by withdrawing larger amounts in cash that come from an exchanger or an exchange, are asked by banking institutions to clarify this and as a consequence the banking relationship is cancelled. In the same way, the exchanges terminate their client relationships, thus providing a picture of successive exchangers, exchanges and banking institutions.

Why would anyone make use of a Bitcoin trader while there are reliable and cheaper alternatives available? The answer to this question lies with the offered anonymity, the offered cash upon selling the Bitcoins as well as with the source of origin of these Bitcoins. From various search and detect investigations it has become apparent that criminals have exchanged their Bitcoins via these types of traders. Millions of Bitcoins have thus been exchanged against cash with high commission fees for the trader as a remuneration.[35] These Bitcoins stem from illegal activities on the dark web.[36]

Customers carefully examine the reviews written about a trader. Positive reviews are often a decisive influence to do business with a trader. The trust is then further built by first starting with smaller currency transactions.

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[33] Criminal investigations of the money laundering team of FIOD (Fiscal Intelligence and Investigation Service) Haarlem (code name: Basset), the money laundering team FIOD Zwolle (code name: Iceberg) and the Nocis investigation of Police Midden-Nederland.

[34] Criminal investigations of the money laundering team of FIOD (Fiscal Intelligence and Investigation Service) Haarlem (code name: Basset), the money laundering team FIOD Zwolle (code name: Iceberg) and the Nocis investigation of Police Midden-Nederland.

[35] See for example the press release on the website of the Dutch Tax and Customs Administration, '10 arrests in international Bitcoin investigation', 20 January 2016, www.belastingdienst.nl/wps/wcm/connect/nl/fiod/nieuws/10_aanhoudingen_in_internationaal_bitcoins_onderzoek.

[36] B.H.M. Custers, J.J. Oerlemans and R.L.D. Pool 'Ransomware, cryptoware en het witwassen van losgeld in Bitcoins' ['Ransomware, cryptoware and money laundering ransom money in Bitcoins', *Strafblad [magazine]* 2016 (2), 15.
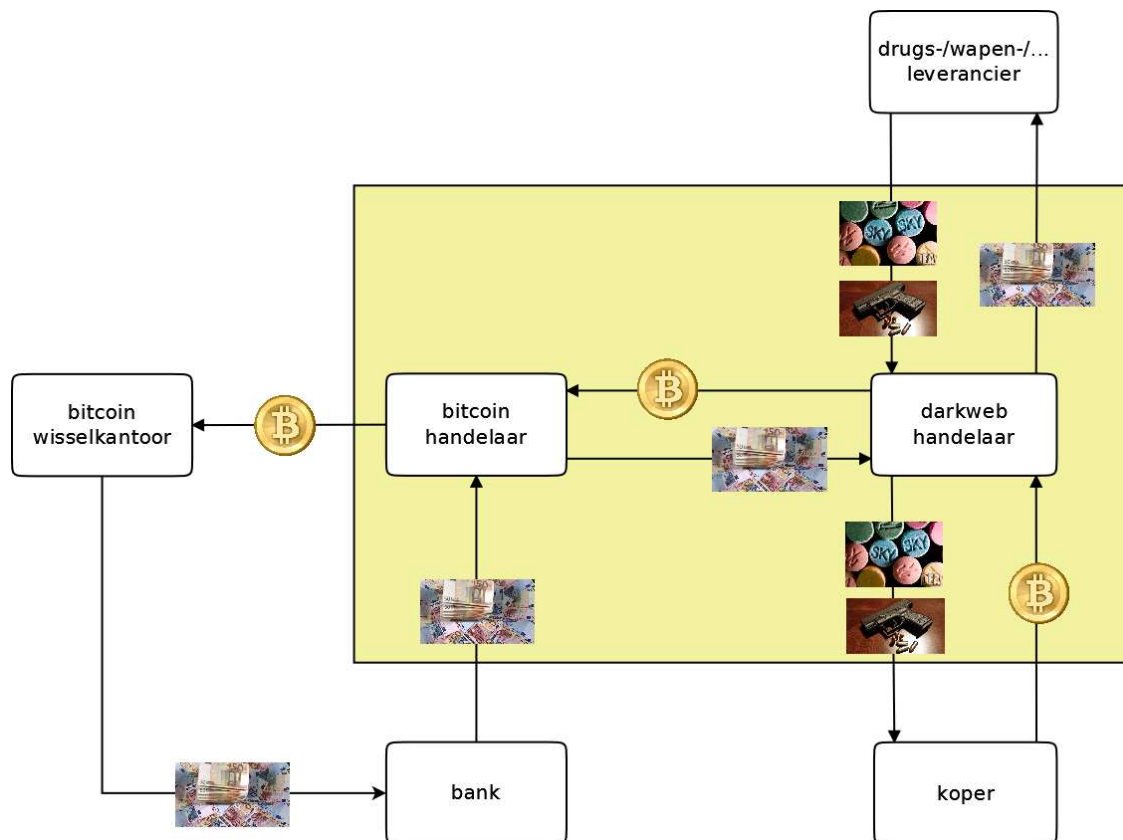
Figure 6 A schematic representation of a criminal cash flow via the Bitcoin trader

Search and detect investigations [37] and scientific research [38] show that the circumstances for exchanging Bitcoins at a Bitcoin exchanger or Bitcoin exchange and the circumstances for exchanging them at a (facilitating) Bitcoin trader are substantially different. The table below shows the differences adopted so far, therefore explicitly not exhaustive.

Reference	*Regular Bitcoin exchange*	*(Criminal) Bitcoin trader*
Place of service	*At a national or international exchange set up for this purpose*	*In public places, such as a (parking place of a) fast food chain or supermarket, or in a private house.*
Remuneration services	*A regular exchange charges about 0.25 - 0.30% of the amount to be exchanged as commission fee for the services rendered.*	*A trader charges 7 - 15% of the amount to be exchanged as commission fee.*
Money transactions	*Scriptural money and verifiable*	- *Cash purchase (and sale) of commercial transactions;* - *Bank balances are withdrawn in cash upon check out (unverifiable cash withdrawals)*
Anonymity customer	*The number of Bitcoins to be paid and the bank account number of the customer to which the value has to be transferred, is known to the*	*Only the amount of Bitcoins that is asked to exchange is known to the trader. Trader and customer often do not know each other's identity.*

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[37] Criminal investigations of the money laundering team of FIOD (Fiscal Intelligence and Investigation Service) Haarlem (code name: Basset), the money laundering team FIOD Zwolle (code name: Iceberg) and the Nocis investigation of Police Midden-Nederland.

[38] R.S. van Wegberg, J.J. Oerlemans and M.O. van Deventer, 'Bitcoin Money Laundering: Mixed Results? An explorative study on money laundering of cybercrime proceeds using Bitcoin'.

		exchange.
Visibility	An exchange is visible/known in the following ways: - a website - registered with the Chamber of Commerce - known with the tax authority	A trader is visible/known in the following ways: - cannot be found under his own name on the 'surface' web - not (actually trading accordingly) registered with the Chamber of Commerce - not known with the tax authority for exchange activities.
Bitcoin history / origin	Very diverse	One or more of the following characteristics occur - above average -: - the Bitcoins show that one or several mixers have been used - Bitcoins show that trading was done on the dark web.
Administration	In accordance with laws and regulations	Absent
Customers	Very diverse	Customers active on the dark web
Scope	Varies from small to large amounts	Large amounts for each transaction
Communication to the customer	Public via mainstream communication lines	Shielded: via dark web or via blocked communication methods such as Blackberry Messenger, Whatsapp and Threema[39], obscured use of language via the telephone or in text messages.

The above can be summarised as follows:

A Bitcoin trader provides a service by exchanging Bitcoins against cash. He does this for a commission fee. This is a relatively high commission: where a regular exchange would charge 0.25 - 0.30%, the Bitcoin trader, on the other hand, charges between 7% and 15% of the transaction amount. The customers of the Bitcoin trader are willing to pay this high commission for the anonymity they get when selling their Bitcoins (cash out). The trader generally does not know his customers. He each time receives large amounts of Bitcoins from his customers. The Bitcoins have been in contact with the dark web and/or with one of several mixers. The trader himself sells his Bitcoins if he so needs to, to exchange offices and exchanges upon which the countervalue is deposited on the bank account. The balance is withdrawn in cash in order to again purchase Bitcoins against cash.

It is general knowledge and also a money laundering typology that cash is often used in organised crime.[40] It is also general knowledge and also a money laundering typology that physically transporting large quantities of cash brings about substantial security risks.[41]

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[39] Threema is an instant messaging programme allowing users to exchange messages and files amongst each other. Threema advertises its product with the marketing feature that security, encryption and privacy are key in the application. Moreover, Threema offers the possibility to use the programme on several devices under one single username. This means that the user can see all the sent and received messages on all of his or her devices if he logs on with his user name.

[40] The money laundering typology involves: In case of large quantities of cash in various currencies: it is generally known that various forms of crime involve large amounts of cash in various currencies." The general knowledge involves: The Court considers it generally known that various forms of crime involve large amounts of cash usually in large denominations, while denomination bank notes of €500.00 are a rarity in mainstream payment transactions. (ECLI:NL:RBMNE:2015:1838). See https://www.amlc.nl/producten/witwasindicatoren/.

[41] The money laundering typology involves: In case of physical transport of large amounts of cash: the physical movement of large amounts of cash involves a serious safety risk. The general knowledge involves: The Court considers it general knowledge for private individuals having large sums of money available to be highly unusual given the risk of theft and fire for example, whereby money is not insured. (ECLI:NL:RBMNE:2015:1838) and "it is general knowledge that the physical

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The trader showcases himself anonymously on the 'surface' web and the dark web. It is general knowledge that the dark web is mainly used for (the preparation of) criminal activities.[42] The trader meets his customers in public places, such as a fast food restaurant, where the transaction is carried out.

Various search and detect investigations[43] show that the Bitcoin trader is a link in the money laundering process of criminals. In view of the above, the Bitcoin trader accepts fully aware that there is a considerable chance for the Bitcoins he receives to be proceeds of crime. The Bitcoin trader can be regarded as a facilitator of money laundering.

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transportation of large amounts of cash involves a serious safety risk'." (ECLI:NL:GHSHE:2015:1181). See https://www.amlc.nl/producten/witwasindicatoren/.
[42] R.S. van Wegberg, J.J. Oerlemans and M.O. van Deventer, 'Bitcoin Money Laundering: Mixed Results? An explorative study on money laundering of cybercrime proceeds using Bitcoin'.
[43] Criminal investigations of the money laundering team of FIOD (Fiscal Intelligence and Investigation Service) Haarlem (code name: Basset), the money laundering team FIOD Zwolle (code name: Iceberg) and the Nocis investigation of Police Midden-Nederland.

Part 2   Indicators of money laundering

Bitcoin trader

The following general objective characteristics regarding the Bitcoin trader appear in investigations into Bitcoin traders who facilitate money laundering:

-   asking for high commission fees for exchanging (purchasing) Bitcoins for euros (or another legal tender) against cash compared to regular exchanges and exchange offices.
-   bringing in customers anonymously, whether or not via the dark web.
-   accepting or having Bitcoins available with a history on the dark web, considering the dark web is known for its major share in illegal activities.
-   accepting large quantities of Bitcoins from a private person, which said quantity is not common for an average private person.
-   acquiring or having Bitcoins available that generate from a Bitcoin mixer.
-   working with customers who prefer large amounts in cash as opposed to cashless transfer.
-   the absence of administrative records with regard to the service, services provided and customers.
-   the absence of any form of relevant scope of legal business economic activities (products/services) that can offer an explanation for the Bitcoin transactions and/or cash money.
-   withdrawing large amounts in cash from the bank account shortly after having received the money originating from regular Bitcoin exchanges and exchange offices.
-   working together with customers who do not have a legal commercial explanation for making use of the services of a Bitcoin trader.
-   making use of the services of a Bitcoin trader solely serves to generate anonymity.
-   persons who make use of the services of a Bitcoin trader are persons who want to prevent their identity from being exposed.
-   making use of the services of a Bitcoin trader solely serves the purpose to ensure that the (criminal) origin of the Bitcoins cannot be traced to the customer.
-   the sole purpose of making use of a Bitcoin trader is to disguise the (criminal) origin of the Bitcoins and the cash.

Bitcoin mixer

The following general objective characteristics regarding the Bitcoin mixer appear in investigations into Bitcoin traders who facilitate money laundering:

-   a large part of the Bitcoins that are in a mixer, are related to the dark web.
-   the sole purpose of making use of a Bitcoin mixer is to disguise the (criminal) origin of the Bitcoins.
-   missing a legal commercial explanation for making use of a Bitcoin mixer.
-   persons who make use of the services of a Bitcoin mixer are persons who want to prevent their identity and/or their transaction history from being exposed.

Customer of the Bitcoin trader

-   a person who trades anonymously in goods and/or offers services on the dark web.
-   the dark web is known for the majority of illegal activities taking place there that are paid for in cash, in Bitcoins or in another virtual currency.
-   paying and willingness to pay high commission fees for converting (selling) Bitcoins in exchange for euros (or another legal tender) against cash, as opposed to commission fees that regular Bitcoin exchanges and exchange offices charge.
-   the nature and extent of his exchange transactions do not match the nature and extent of his legal activities, income and assets.