

CRYPTO ASSETS

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15/09/2022



OECD International Academy for Tax and Financial Crime Investigation

Managing Financial Investigations





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Managing Financial Investigations



IOTA

Intra-European Organisation
of Tax Administrations



Federale
Overheidsdienst
FINANCIEN

**BIJZONDERE
BELASTINGINSPECTIE**



Financial investigations?



IT'S ALL ABOUT THE MONEY!

CORRESPONDENT BANKING – FOLLOW THE
MONEY

Hot news!

ICIJ INTERNATIONAL CONSORTIUM
of INVESTIGATIVE JOURNALISTS



Journalists from De Tijd, Knack and Le Soir were part of the journalists researching the documents. Belgium appeared 365 times in the 2,100 leaked documents. The four major Belgian banks, ING, KBC, Belfius and BNP Paribas Fortis, were featured. In one case, half a billion dollars was transferred in one go from a Belgian bank account to a letterbox company in the British Virgin Islands. ING Belgium in particular turned out to be a pivot in the suspicious cash flows through its correspondent banking services and former branch office in Geneva. The bank appeared to be involved in almost half of the reports in which Belgium occurs.

Belgium appeared 365 times in the 2,100 leaked documents.

17,38 %

**CORRESPONDENT BANKING – FOLLOW THE
MONEY**

Basic Wire Transfer



Originator



Originating
Bank



Intermediary
Bank



Beneficiary
Bank



Beneficiary



CORRESPONDENT BANKING – FOLLOW THE MONEY

Basic Wire Transfer Multiple Intermediaries



**KBC-
bank
Belgium
in USD**



**JP
Morgan
in the
USA**



**FEDERAL
RESERVE
BANK
USA**



**City
Bank in
the USA**



**ING-bank
Belgium in
USD**

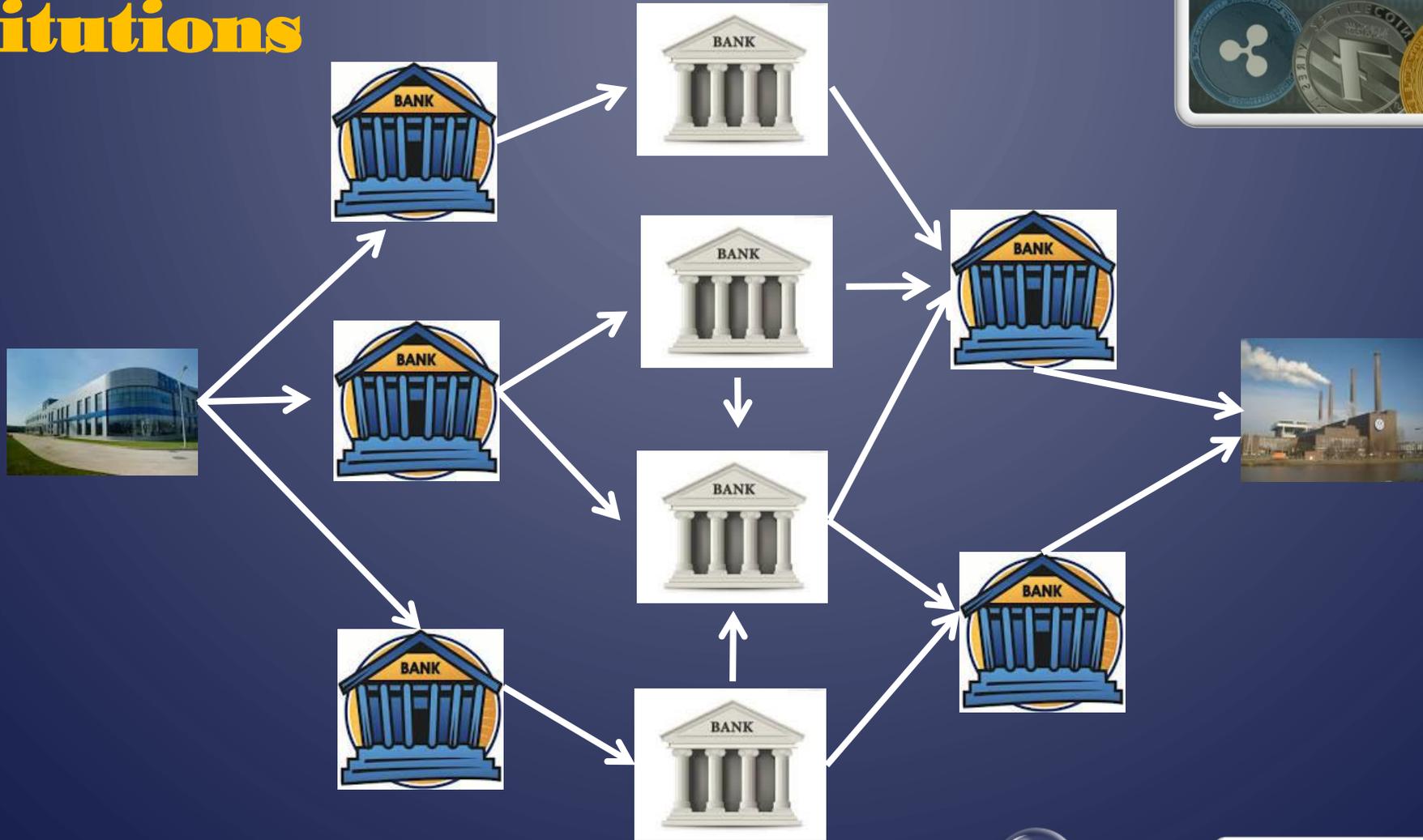


CORRESPONDENT BANKING – FOLLOW THE MONEY



Basic Wire Transfer

Multiple Institutions



CORRESPONDENT BANKING – FOLLOW THE MONEY

Criminal Funds Flow



CORRESPONDENT BANKING – FOLLOW THE MONEY

CORRESPONDENT BANKING – FOLLOW THE MONEY



TXN Date	Base Amount	Originator Name	Originator Account ID	Originator Address Street	Originator Address City	Originator Country Code	Originator's Bank Name	Beneficiary Name	Beneficiary Account ID	Beneficiary's Bank Name	Bank to Bank Instructions
TXN_EXCTN_DT	TXN_BASE_AM	SCND_ORIG_NM	SCND_ORIG	SCND_ORIG	SCND_ORIG	ORIG_ADDR_C	ORIG_NM	SCND_BENF	SCND_BENEF	BENEF_NM	BANK_TO_BANK
15-Jun-07	\$29,973.02	Chester Chan	12345	Suite 4 Chen	BEIJING	CN	BANK OF CHINA	Bad Guy	74310753794	BANK INDONESIA	FOR LIVING COST
29-Oct-10	\$100,950.00	Desert Heat	21296-00	PO Box 89	SANAA	YE	UNITED ARAB BANK	Bad Guy	1001565223	COOPERATIVE BANK	Consulting Fee
18-May-09	\$10,000.00	Bad Guy	ad67898	7th Avenue,	LAGOS	NG	ECOBANK NIGERIA	NewCo Ltd	sdrea	JPMORGAN CHASE	Invoice 23423425
1-Sep-10	\$69,001.94	Bad Guy	12345678	7th Avenue,	SHARJAH	AE	UNITED ARAB BANK	Bobs Boats	HY98036	UBS BANK	Electronic Goods
1-Oct-10	\$100,950.00	Bad Guy	876543456	7th Avenue,	SHARJAH	AE	UNITED ARAB BANK	Bobs Boats	HY98036	UBS BANK	Trade Goods
30-Aug-10	\$1,400,000.00	DW82902652543	Bad Guy	6 Maple Ave	CALGARY	CA	TD BANK	Bobs Boats	LB20005600	BANK AUDI S.A.L	Investments
30-Jan-13	\$40,000.00	Muhammad Ali	678946	21 Safari Wa	KANO	NG	FIDELITY BANK	ABC Corp	053-05533	HSBC HONG KONG	B/O Jessie James

Hot news!



In one case, half a billion dollars was transferred in one go from a Belgian bank account to a letterbox company in the British Virgin Islands.

500,000,000.00 \$



CORRESPONDENT BANKING – FOLLOW THE MONEY

LAW ENFORCEMENT & BANK COLLABORATION



- WHO TO SERVE & WITH WHAT (MLATS; EGMONT; INTERPOL; SUBPOENAS)
 - WHO IN THE US? (FED, CHIPS)
- EACH BANK IS DIFFERENT
- BANK SAR FILING
- ASSET SEIZURE ORDERS

What...is a Cryptocurrency?

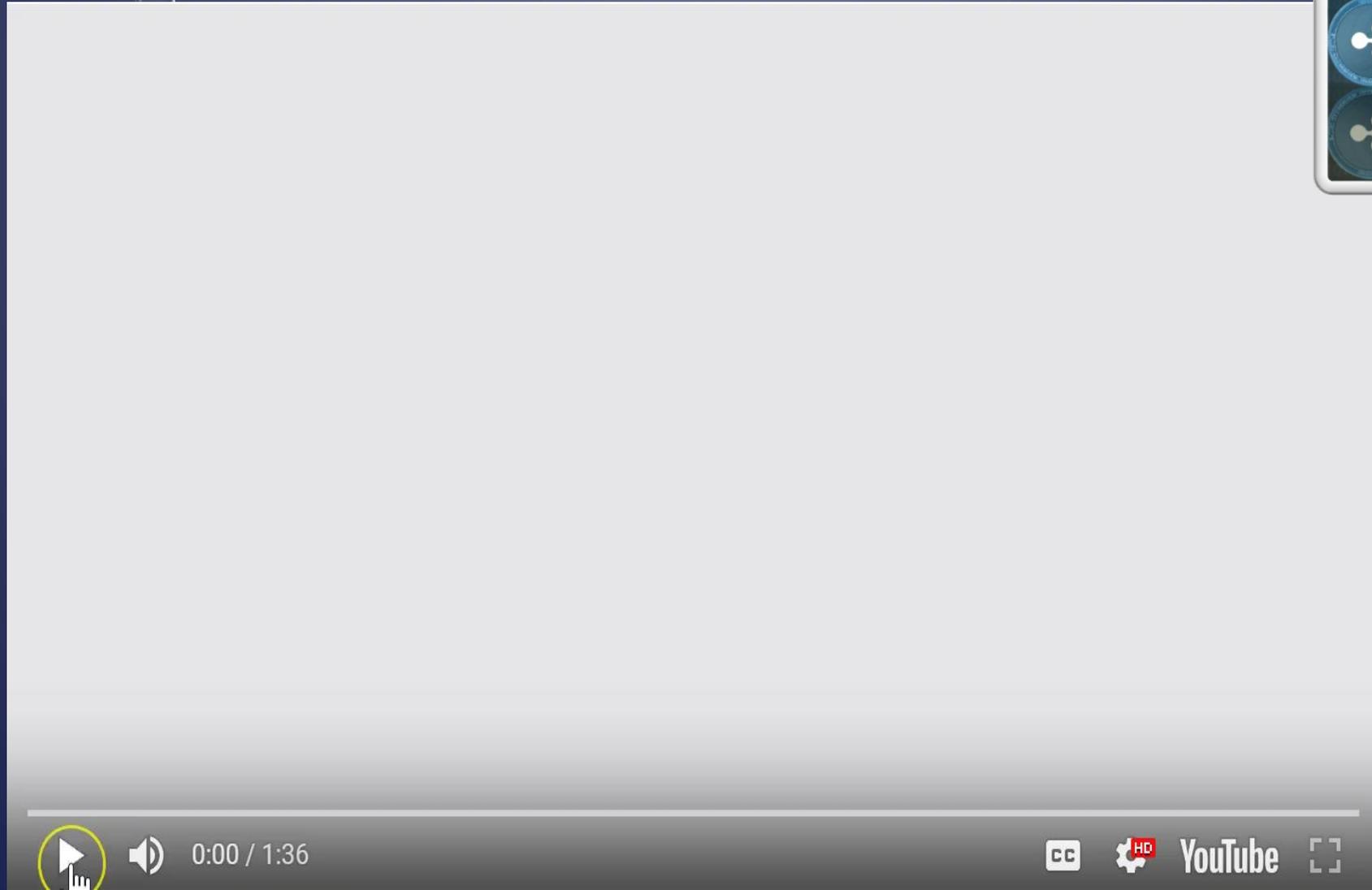


- Cryptocurrency (or Cryptoasset) are a type of virtual currency or alternative currency designed to work as a medium of exchange within certain communities.
- A cryptocurrency uses cryptography to secure transactions, control the creation of additional units, and verify the transfer of assets.
- Cryptocurrencies mainly use decentralised control
 - No single point of contact
 - No regulatory body
- The decentralised control of each cryptocurrency works through distrubuted ledger technology, typically a blockchain, that serves as a public financial transaction database.

What...is a Cryptocurrency?



- Over 2,100 available
- Different uses
- Different features
- Total market capitalisation and trading volume is enormous



What...is a Cryptocurrency?

Currency	Average rate	Market value	Volume (24h)	Exchange (24h)
1  Bitcoin (BTC)	57 684.00 USD	1 078 951 984 661.00 USD	64 729 631 749.00 USD	2.94%
2  Ethereum (ETH)	3 525.00 USD	408 003 494 910.00 USD	42 368 534 705.00 USD	2.31%
3  Binance Coin (BNB)	626.75 USD	96 827 057 831.00 USD	4 013 399 730.00 USD	0.27%
4  Dogecoin (DOGE)	0.718 USD	93 220 563 499.00 USD	29 225 167 974.00 USD	23.10%
5  XRP (XRP)	1.58 USD	72 806 058 248.00 USD	8 321 702 066.00 USD	-0.42%
6  Tether (USDT)	1.00 USD	55 450 864 493.00 USD	182 912 164 309.00 USD	-0.32%
7  Cardano (ADA)	1.61 USD	51 565 994 689.00 USD	6 351 302 964.00 USD	-0.55%
8  Polkadot (DOT)	39.66 USD	39 257 905 350.00 USD	2 283 120 553.00 USD	-2.61%
9  Bitcoin Cash (BCH)	1 389.64 USD	26 008 475 094.00 USD	10 009 299 187.00 USD	-2.84%
10  Litecoin (LTC)	345.21 USD	23 066 628 639.00 USD	11 425 466 531.00 USD	-5.20%

May 8th 2021



Currency	Average rate	Market value	Volume (24h)	Exchange (24h)
1  Bitcoin (BTC)	38 671.00 USD	726 549 557 877.00 USD	37 241 464 083.00 USD	12.06%
2  Ethereum (ETH)	2 357.05 USD	275 736 528 174.00 USD	25 666 860 282.00 USD	8.59%
3  Tether (USDT)	0.998 USD	61 900 669 608.00 USD	67 403 062 082.00 USD	-0.32%
4  Binance Coin (BNB)	321.93 USD	49 779 620 980.00 USD	1 893 336 388.00 USD	6.65%
5  Cardano (ADA)	1.36 USD	43 726 078 185.00 USD	2 231 714 593.00 USD	10.98%
6  XRP (XRP)	0.666 USD	30 841 167 006.00 USD	2 582 507 492.00 USD	9.81%
7  Dogecoin (DOGE)	0.225 USD	29 497 819 560.00 USD	2 721 115 896.00 USD	13.11%
8  USD Coin (USDC)	0.999 USD	27 320 751 934.00 USD	2 508 060 030.00 USD	-0.23%
9  Polkadot (DOT)	14.95 USD	15 350 391 713.00 USD	1 014 294 013.00 USD	10.25%
10  Binance USD (BUSD)	1.00 USD	11 927 543 267.00 USD	5 272 610 805.00 USD	-0.05%

July 26th 2021



September 12th 2022



FATF[®] Definition of Virtual currencies/Cryptocurrencies



Financial Action Task Force definition:

“Virtual currency is a digital representation of value that can be digitally traded and functions as:

- (1) A medium of exchange; and/or
- (2) A unit of account; and/or
- (3) A store of value, but does not have legal tender status (i.e., when tendered to a creditor, is a valid and legal offer of payment) in any jurisdiction. It is not issued nor guaranteed by any jurisdiction, and fulfils the above functions only by agreement within the community of users of the virtual currency”

Key Points:

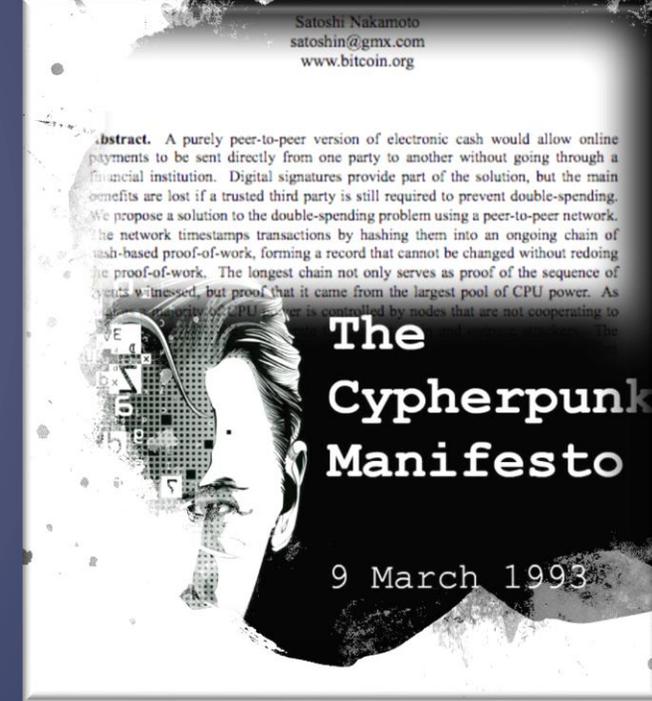
- Decentralized – No central agency to approach for information on users
- Peer to Peer – controlled by the invested community
- Issued through providing resources to the network – This helps to verify transactions and provide security.
- Value is based on supply & demand, the economic policy or desire to invest in the technology on offer.

In its most recent update to the guidance the FATF also defined some cryptocurrencies are “virtual assets” which they defined as: “A virtual asset is a digital representation of value that can be digitally traded, or transferred, and can be used for payment or investment purposes. Virtual assets do not include digital representations of fiat currencies, securities and other financial assets that are already covered elsewhere in the FATF Recommendations.”

Where... did they come from?

A brief history

- 1992 – Cypherpunks
- A cypherpunk is any activist advocating widespread use of strong cryptography and privacy-enhancing technologies as a route to social and political change.
- *“Privacy is necessary for an open society in the electronic age... We are defending our privacy with cryptography...and with electronic money”.*
(Eric Hughes, ‘A Cypherpunk Manifesto, 1993)



Where... did they come from?

Electronic money:

- 1) Convenient
- 2) Untraceable
- 3) Liberated from the oversight of governments and banks



How does a normal card payment work?

- 1 • I present my debit card at the hotel to pay my bill.
- 2 • The card reader communicates with the hotels bank via a merchant acquirer.
- 3 • The hotel's bank communicates with my bank via another merchant acquirer.
- 4 • My bank pays the hotel's bank via the second merchant acquirer.
- 5 • The hotel's bank confirms receipt of payment via the original merchant acquirer.
- Payment is approved by the hotel card reader.
- The transaction involves the hotel, two banks, and two merchant acquirer services.
- 5 • Fees are extracted by each bank and merchant acquirer and often the retailer.



How does a Bitcoin transaction operate?

- 1** • I present the app on my phone or other device to the retailer.
 - 2** • The retailer's Bitcoin app checks my Bitcoin wallet via the blockchain.
 - 3** • The Bitcoin is transferred from my wallet to the retailer's wallet via the blockchain.
 - The transaction is recorded publicly on the blockchain.
 - The transaction involves me, the retailer and the Blockchain.
- 1** • No fees are extracted therefore, no one profits other than the retailer.





TRANSACTIONS

- In simple terms the transfer of bitcoin from one address to another. More precisely a transaction is a signed data structure expressing a transfer of value. Transactions are transmitted over the bitcoin network, controlled by miners, and included in blocks, made permanent on the blockchain.
- Each transaction has two sides, inputs and outputs.
- The inputs show the amount being sent and what sender address are involved.
- The outputs show the amount of bitcoin being credited and the recipients address.

inputs: 2 (0.00292888 BTC) unique addresses: 2, source transactions: 2	outputs: 2 (0.00291008 BTC) unique addresses: 2, spent: nothing
0. 1LmYcTgoxYCBN9iVjXtuJkUMMww3ZKTJdf 0.00252617 BTC prev. tx	0. 16KnJRPXbNu3aJraaMMX274k2VYGPoMDS (change address) 0.00039096 BTC unspent
1. 16KnJRPXbNu3aJraaMMX274k2VYGPoMDS 0.00040271 BTC prev. tx	1. 3BZWU6A4mK6neCte3U9qspmy6ZKJ5YHLrA  CoinPayments.net 0.00251912 BTC unspent

- Importantly the inputs and outputs do not necessarily add up to the same amount.
- This is because there is a fee to pay for including a transaction in a block. As outlined computational power and energy is consumed when a block is mined. The fee provides some compensation for those carrying out the mining activity.

MINING

- In the previous slide we have looked at the concept of a blockchain. This is the public ledger of all transactions which everyone in the Bitcoin network accepts as the authoritative record of ownership.
- How though can everyone agree on this record without having to trust anyone else?
- How can the record withstand attack from dishonest or malicious parties?

- Bitcoin looks to solve this by creating what is essentially a lottery in which the winner gets to include transactions in the ledger (blockchain).
- Importantly though the financial incentives of this process encourages honest behaviour from the participants.

- There is a cost to entering the lottery as generating the winning numbers is a random process which requires computer processing power. Generating this power costs the participants in electricity expended.



MINING

ICELAND WILL USE MORE ELECTRICITY MINING
BITCOINS THAN POWERING 1ST HOMES IN 2018



MINING



The University of Cambridge's online tool estimates Bitcoin's annual electricity consumption is more than The Netherlands, United Arab Emirates and Argentina



MINING

- The winner of the lottery gets to mint a number of new bitcoins and claim the transaction fees (coinbase transaction) for the ledger entry they have created (a block).
- However they cannot claim this reward until a timelock has passed.
- In the meantime if any node rejects any of the transactions in the ledger entry (block) because the rules have not been followed the winner loses their reward.

- As a result of dishonest behaviour has serious economic costs for participants. Further to this the ongoing success of the network provides participants with the opportunity of long term rewards through the asset appreciating in value.
- Dishonest behaviour would have a high risk of undermining the value of the asset and reducing the long term opportunities through loss of confidence in the protocol.

- Participants are called miners, the lottery process is called mining and the concept behind it is proof of work. Miners can also be nodes on the network.



PROOF OF WORK EXPLAINED



WDTM

Why do people use it?



- **Spend it:**

In 2010, 10.000 bitcoins were used to buy 2 pizza's

- Value determined
- No bank needed
- No 3rd party needed

- **Darkweb market places**



Why do people use it?



Explore. Privately.

You're ready for the world's most private browsing experience.



Tor is free to use because of donations from people like you. [Donate Now](#)

Questions? [Check our Tor Browser Manual](#)

Get the latest news from Tor straight to your inbox. [Sign up for Tor News](#)

The Tor Project is a US 501(c)(3) non-profit organization advocating human rights and freedoms by creating and deploying free and open source anonymity and privacy technologies, supporting their unrestricted availability and use, and furthering their scientific and popular understanding. [Del.icio.us](#)

Links to Dark Web Markets

Welcome to our site. Below, you will find a list of links to dark web markets for your research. Before navigating markets on the dark web, you will need to install the TOR browser. We describe the process below, at the bottom of the page.

For an up to date list of markets you can always check <http://tormarketsfxi2my.onion/> and there are many more dark web links on the hidden wiki at <http://hiddenwiki7wiyzr.onion/>



Appollon

<http://apolloncbh3sgd23.onion>

Avaris

<http://xnwoz5jjwzsubdzs455ab2svrzupdk3wwrjy77gkhc66nyxaiyhwtkid.onion>

BitBazaar

<http://ign6nnulov7lctpon2kjinroosncu5i7sqaybwhd6ase3rs5es2h3fkid.onion>

Cannahome

<http://cannahome5zoy2sc.onion>

Cannazon

How does it work?



Indicators:

- Mobile Apps
- Browser history
- Hardware wallets
- ToR Browser

How does it work?



Hardware wallets:

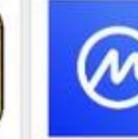
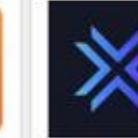
- Keep Key
- Ledger
- Nano
- Trezor



How does it work?

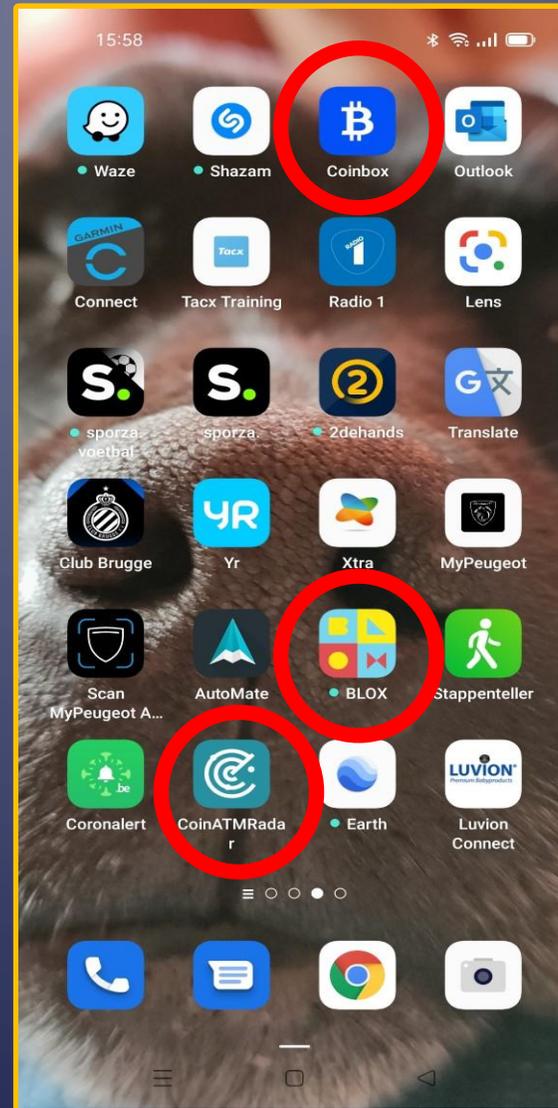
Mobile wallets



 <p>Coinbase Coinbase Android ★★★★★</p>	 <p>Crypto App - Widgets TheCrypto.app ★★★★★</p>	 <p>Cryptocurrency Inc. senderdebyche ★★★★★</p>	 <p>Blockfolio - bekijs Blockfolio, Inc. ★★★★★</p>	 <p>CoinStats - Crypto Coin Stats, Inc. - Crypto ★★★★★</p>	 <p>Bitcoin price - Crypto Cryptocurrencyapps.com ★★★★★</p>	 <p>Crypto Market Cap Crypto Market Cap ★★★★★</p>	 <p>CoinGecko - Bitcoin CoinGecko ★★★★★</p>	 <p>CMA - Bitcoin & Crypto XDJT ★★★★★</p>	 <p>CoinMarketCap - Crypto CoinMarketCap.com ★★★★★</p>	 <p>Binance Exchange Binance Inc. ★★★★★</p>	 <p>Crypto Cards - Collect Phoneum ★★★★★</p>
 <p>Crypto School - Learn LineCurrency, Inc. ★★★★★</p>	 <p>Muntmarkt - Bitcoin Crypto Lab ★★★★★</p>	 <p>Crypto.com - Buy & Sell Crypto Technology Inc. ★★★★★</p>	 <p>HODL - Real-Time HODL, Media Inc. ★★★★★</p>	 <p>Quicrypto: Earn Crypto tokens ★★★★★</p>	 <p>Luno: Buy Bitcoin Luno ★★★★★</p>	 <p>Crypto News NewsCorp ★★★★★</p>	 <p>Bitcoin, Ethereum & More INVESTING.com ★★★★★</p>	 <p>Interactive Crypto marketing66 ★★★★★</p>	 <p>Exodus: Crypto Portfolio Exodus Movement, Inc. ★★★★★</p>	 <p>Cryptocurrency.com Rome Rock App Studio ★★★★★</p>	 <p>Bitstamp - Buy & Sell Bitstamp ★★★★★</p>
 <p>Simulator - Cryptocurrency Ecosystems OU ★★★★★</p>	 <p>Kraken Pro: Advanced Payward, Inc. ★★★★★</p>	 <p>Learn Blockchain Coding and Programming ★★★★★</p>	 <p>Cryptee Ark Labs NZ ★★★★★</p>	 <p>HiBTC - Cryptocurrency HiBTC Exchange ★★★★★</p>	 <p>Cryptonator cryptocurrency Cryptonator ★★★★★</p>	 <p>Bitcoin Wallet - Buy & Sell Coinbox.org ★★★★★</p>	 <p>CEX.IO Cryptocurrency CEX.IO ★★★★★</p>	 <p>Trust: Cryptocurrency & Bitcoin DApps Platform Inc. ★★★★★</p>	 <p>ANYCOIN - Universal Data-Reactor ★★★★★</p>	 <p>DigiFinex - Buy & Sell DigiFinex Team ★★★★★</p>	 <p>Coinbase Wallet Coinbase Wallet ★★★★★</p>

How does it work?

Mobile wallets



How does it work?



Paper wallets

- QR codes
- Private key or
- Public key

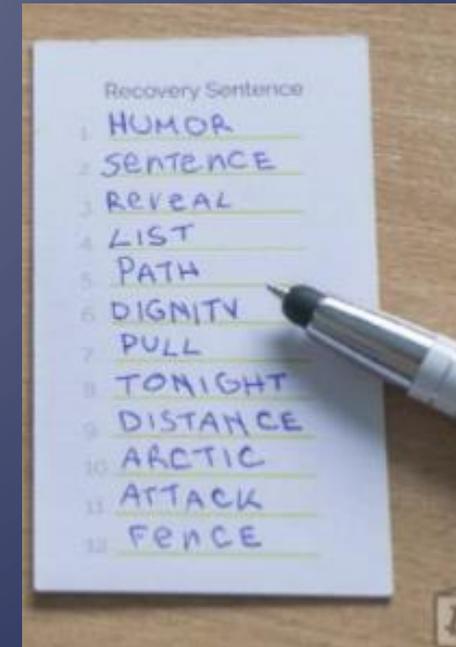
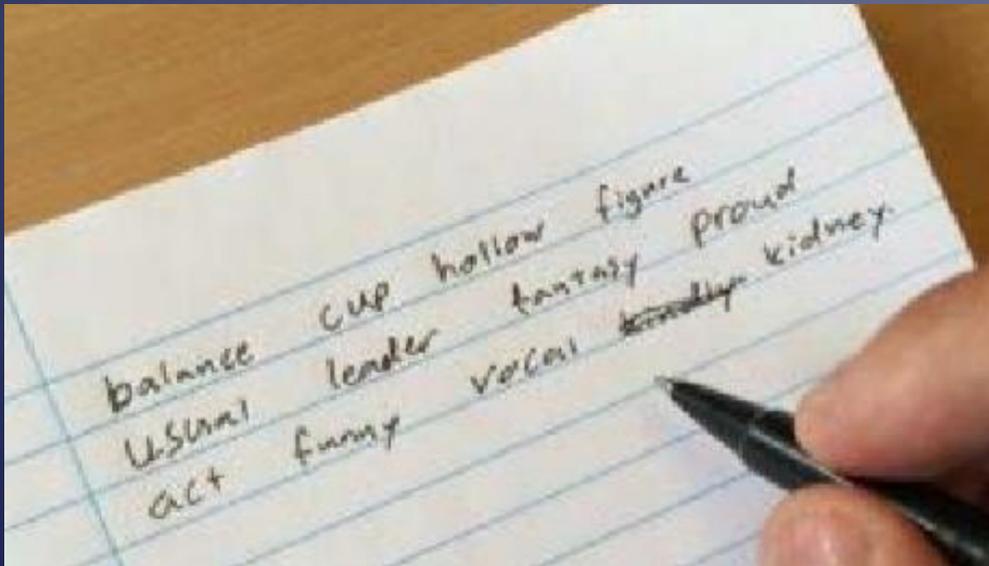


How does it work?



Recovery seeds

- 12, 18 or 24 random words



How does it work?



People horrified by story of man who lost password to \$220m worth of bitcoin: 'Panic inducing to read'

Hundreds of people are commiserating with a man who has lost his password for accessing his 7,002 [bitcoin](#), worth about \$220m, and has just two attempts left before he is locked out forever.

Speaking to [The New York Times](#), Stefan Thomas, a German programmer living in California, revealed that he was gifted the bitcoin, which has fluctuated in value over the years before recently [surging](#), as a reward for making an animated video about bitcoin in 2011.

According to Thomas, he lost the password to his IronKey, an encrypted hard drive that holds the keys to his digital wallet, the same year.



Bitcoin is also unable to help, as it does not store passwords, but rather grants individuals who buy bitcoin a private key to their digital wallet - which only they have access to.

Since then, Thomas told the outlet he has tried eight variations of his commonly used passwords in an attempt to gain access to his IronKey. Unfortunately, his chances are running out, as IronKey only allows users 10 attempts before it “seizes up and encrypts its contents forever,” *The Times* notes.

How does it work?



Receipts

- ATM receipts:
 - How much deposited
 - The type of crypto
 - Destination



Cryptocurrency and illicit finances



Typology 1

Prepaid cards:

- Exchange crypto for fiat currency
- Load fiat currency onto card
- Spend fiat currency using card, or withdraw cash at ATM



Cryptocurrency and illicit finances



Typology 2

CATMs (Cryptocurrency ATMs):

- Mostly cash only
- Independent Supermarkets
- Takeaways
- Gas stations

- AML controls?



Cryptocurrency and illicit finances



Typology 2

CATMs (Cryptocurrency ATMs):

//coinatmradar.com



shitcoins.club Koop en verkoop cryptocurrencies met een van onze geldautomaten De laagste prijzen Veiligheid Anonimiteit

Coin ATM Radar Producers Countries More Support us Blog Log in

Share: [Facebook] [Twitter] Subscribe: [Twitter]

Bitcoin ATM Near Me Search.

Select operation:
 Buy Sell

Select cryptocurrency:
 Bitcoin (BTC) Lightning BTC (LBTC) Bitcoin Cash (BCH) Ether (ETH) Dash (DASH)
 Litecoin (LTC) Zcash (ZEC) Monero (XMR) Dogecoin (DOGE) Tether (USDT) Ripple (XRP)

Address or location:
Search by address... [x] [magnifying glass icon]
 Use my current location

shitcoins.club Koop en verkoop cryptocurrencies met een van onze geldautomaten De laagste prijzen Veiligheid Anonimiteit

Results:
Try search above.

Alternatively, you can find cryptocurrency ATM near you using one of our mobile apps:

GET IT ON Google Play Available on the App Store



Cryptocurrency and illicit finances



Typology 2

CATMs (Cryptocurrency ATMs):

//coinatmradar.com

Bitcoin ATM Near Me Search.

Select operation:

Buy Sell

Select cryptocurrency:

- Bitcoin (BTC) Lightning BTC (LBTC) Bitcoin Cash (BCH) Ether (ETH) Dash (DASH)
 Litecoin (LTC) Zcash (ZEC) Monero (XMR) Dogecoin (DOGE) Tether (USDT)
 Ripple (XRP)

Address or location:

via della fiamme, lido di ostia



Use my current location



Results:



Promoted location nearby:

Punto ATM Bitcoin in Rome at Via Emanuele Filiberto, 34

Based on your search input we found *"Lido di Ostia, Rome, Italy"* and show locations nearby.
If this location is wrong, please make a more specific search.

	<u>Così è La Pizza il Bistrot</u> 	19 km	<u>Rome</u>	Fees: Buy: 9.5% updated online 5% Off BTC2022	Limits: Unknown	Score: +1	Details
	<u>Nuvole D'aromi 2.0</u> 	21 km	<u>Rome</u>	Fees: Buy: N/A, Sell: N/A 5% Off BTC2022	Limits: Unknown	Score: +22	Details
	<u>X Telefonja</u>	22 km	<u>Rome</u>	Fees: Buy: N/A	Limits: Buy: EUR 3000/txn, Daily: EUR 100000	Score: +1	Details
	<u>ListoSolutio</u>	22 km	<u>Rome</u>	Fees: Buy: N/A	Limits: Unknown	Score: +2	Details



Cryptocurrency and illicit finances



Typology 2

CATMs (Cryptocurrency ATMs):

//coinatmradar.com

Bitcoin ATM machine in Rome at Nuvole D'aromi 2.0 – General Bytes.

Location

City: [Rome](#)

Location: [Nuvole D'aromi 2.0](#)

Business phone:

[Show number](#) →

Address:

Viale dei Colli Portuensi, 240b
Rome RM 00151
Italy



Open hours:

Mon: 4:00 pm – 7:30 pm

Tue-Sat: 10:00 am – 1:00 pm, 4:00 pm – 7:30 pm

Sun: Closed



Bitcoin machine details

ATM Type: General Bytes [GB](#)

Supported coins and fees:

5% Off

Coupon code:
BTC2022

Coupon expires on **31-Dec-2022**.

Discount applies to fees.

! Operator disabled price reporting or information is outdated.

	Buy	Sell
Bitcoin	✓ Fees: reporting disabled	✓ Fees: reporting disabled
Bitcoin Cash	✓ Fees: reporting disabled	✓ Fees: reporting disabled
Ether	✓ Fees: reporting disabled	✗
Litecoin	✓ Fees: reporting disabled	✓ Fees: reporting disabled
Ripple	✓ Fees: reporting disabled	✗
Supported fiat:	EUR	EUR

Cryptocurrency and illicit finances



Typology 2

CATMs (Cryptocurrency ATMs):



[//coinatmradar.com](http://coinatmradar.com)

Cryptocurrency and illicit finances



Typology 2

CATMs (Cryptocurrency ATMs):

//coinatmradar.com

Bitcoin ATM Near Me Search.

Select operation:

Buy Sell

Select cryptocurrency:

Bitcoin (BTC) Lightning BTC (LBTC) Bitcoin Cash (BCH) Ether (ETH) Dash (DASH)
 Litecoin (LTC) Zcash (ZEC) Monero (XMR) Dogecoin (DOGE) Tether (USDT) Ripple (XRP)

Address or location:

Mathare North Road, Off Thika, kenia

Use my current location

KENYA SCHOOL
OF MONETARY
STUDIES (KSMS)



A School of the Central Bank of Kenya

Cryptocurrency and illicit finances



CATMs (Cryptocurrency ATMs)

[//coinatmradar.com](https://coinatmradar.com)



General Bytes bitcoin ATM at Kenrail Towers in Nairobi Ring Rd Parklands



General Bytes bitcoin ATM at Kenrail Towers in Nairobi Ring Rd Parklands

© Stadia Maps, © OpenMa



**Kenrail
Towers**

KSMS

Afstand meten
Klik op de kaart om je pad toe te voegen
Totale afstand: 6,80 km (4,22 mijl)

Cryptocurrency and illicit finances



Results:

	Friet Lounge	0.8 km	Ghent	Fees: Buy: N/A	Limits: Buy: EUR 2500/txn, Sell: EUR 2500/txn, Daily: EUR 2500	Score: +1	Details
	De Salon	2.6 km	Ghent	Fees: Buy: N/A, Sell: N/A	Limits: Buy: EUR 3000/txn, Daily: EUR 15000	Score: +2	Details
	Smartphone Fixen	19 km					
	Dranken 	24 km					
	ZeelandICT	35 km					
	De Boeren	40 km					
	Royal Shop 	41 km					
	Smartphone Fixen	41 km					



ar.com

Report a problem

Operator details



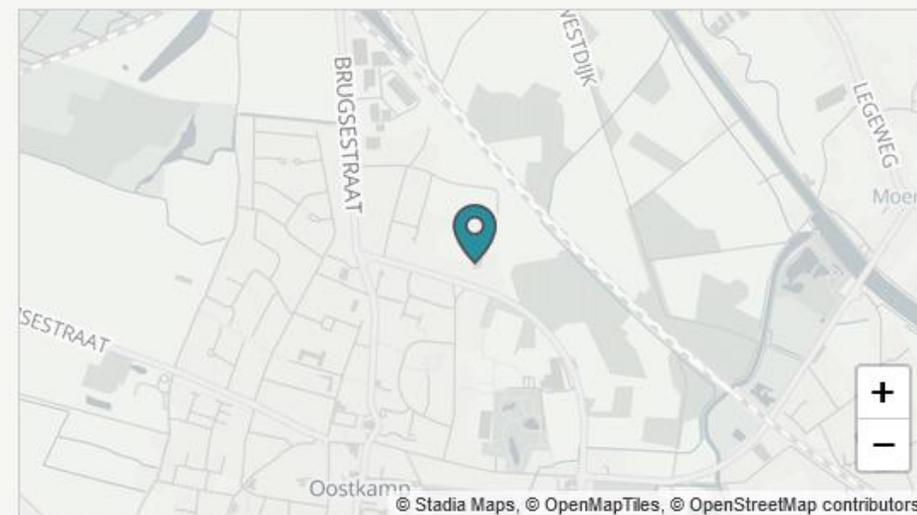
Operator's name: [Shitcoins Club](#)

+48 797 090 008

shitcoins@shitcoins.club

On the map: [All Shitcoins Club bitcoin ATM locations](#)

Are you operator? Check the [list of services we provide](#).



Location

City: [Oostkamp](#)

Location: Gulf Gas Station

Business phone:

[Show number](#) →

Address:

Legeweg 151

8020 Oostkamp

Belgium



Open hours:

Mon-Fri: 7:30 am – 2:00 pm

Sat-Sun: 7:30 am – 5:00 pm



Nearest

Best Buy

Best Sell

Closest bitcoin ATM locations:



[Royal Shop](#)

5.4 km



[Hyundai Wulffaert](#)

24 km



[Akel Supermarkt](#)

34 km



Report a problem

Operator details



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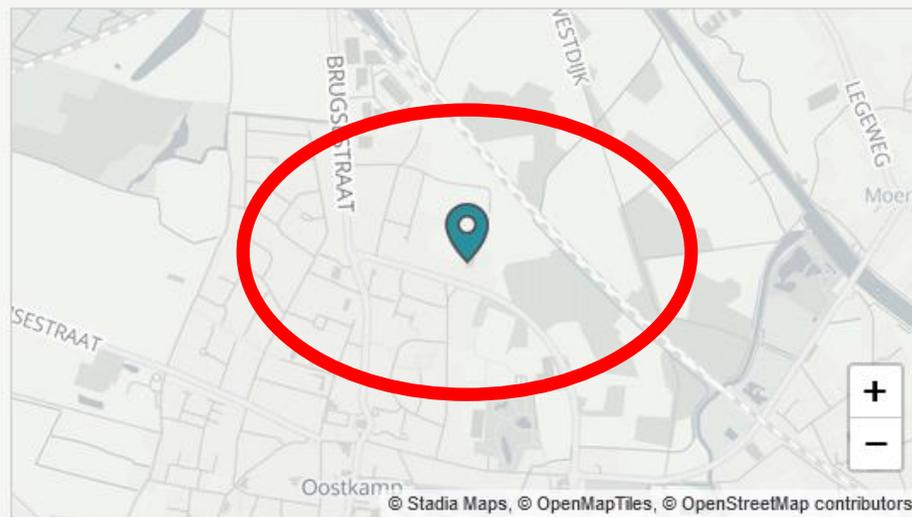
Address:
Legeweg 151
8020 Oostkamp
Belgium



Open hours:

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Nearest

Best Buy

Best Sell

Closest bitcoin ATM locations:



Royal Shop

5.4 km



Hyundai Wulffaert

24 km



Akel Supermarkt

34 km



Cryptocurrency and illicit finances



Typology 2

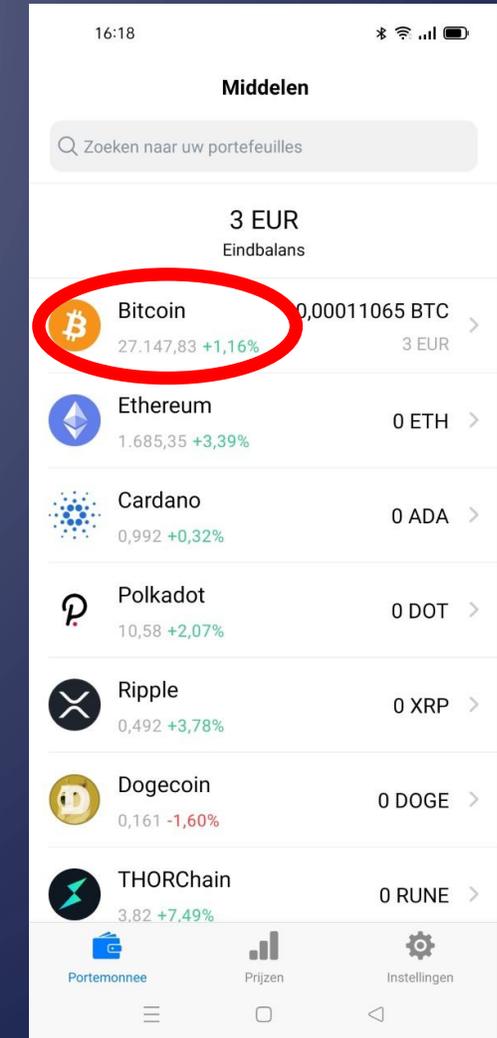
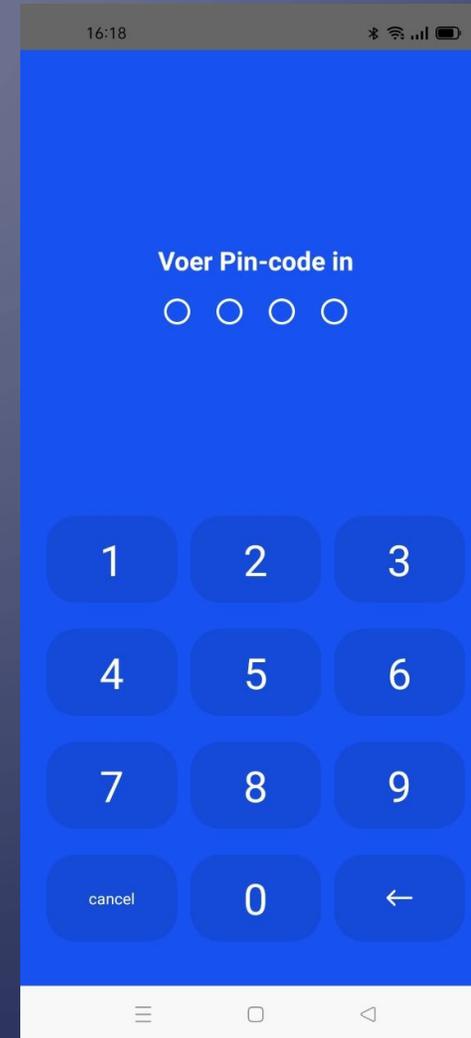
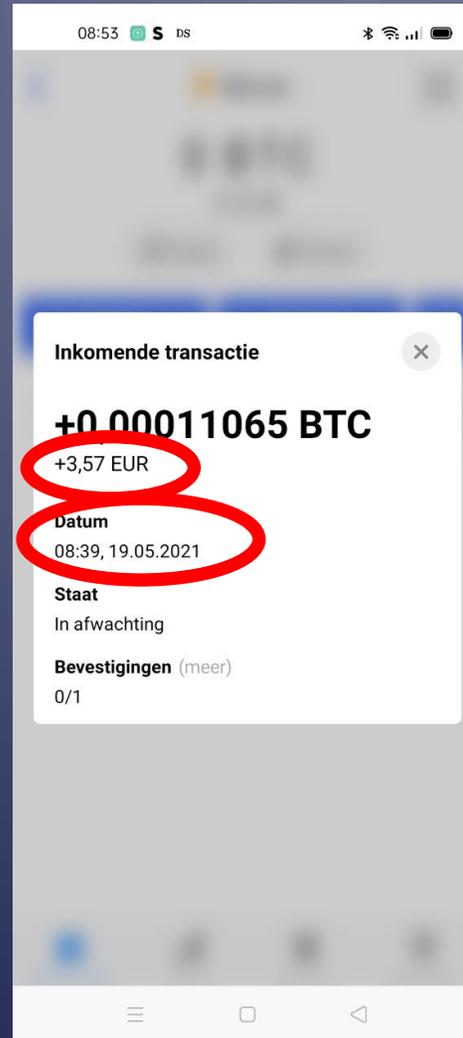
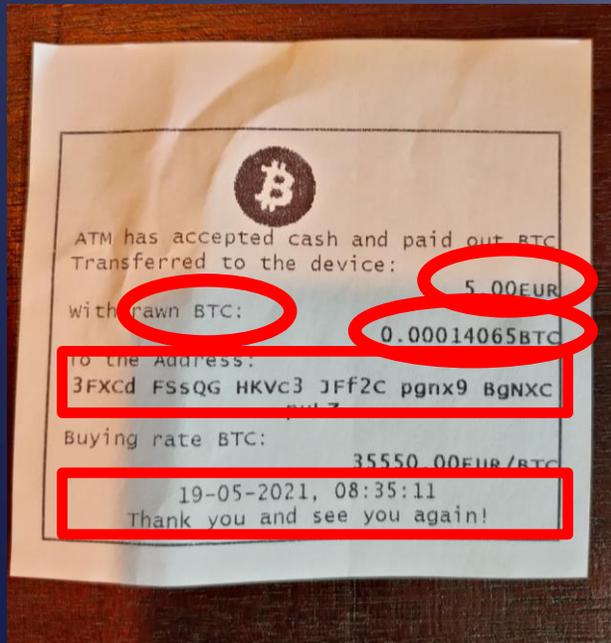
CATMs (Cryptocurrency ATMs)

In the vicinity of an investigator's home.

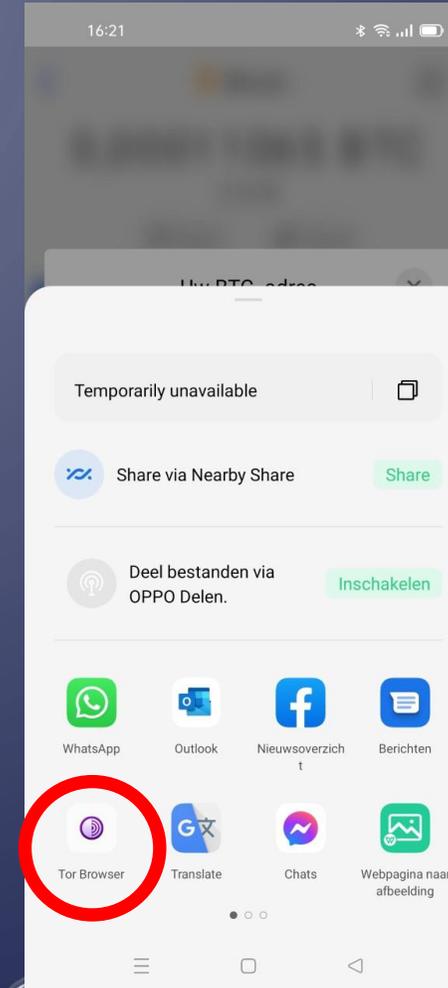
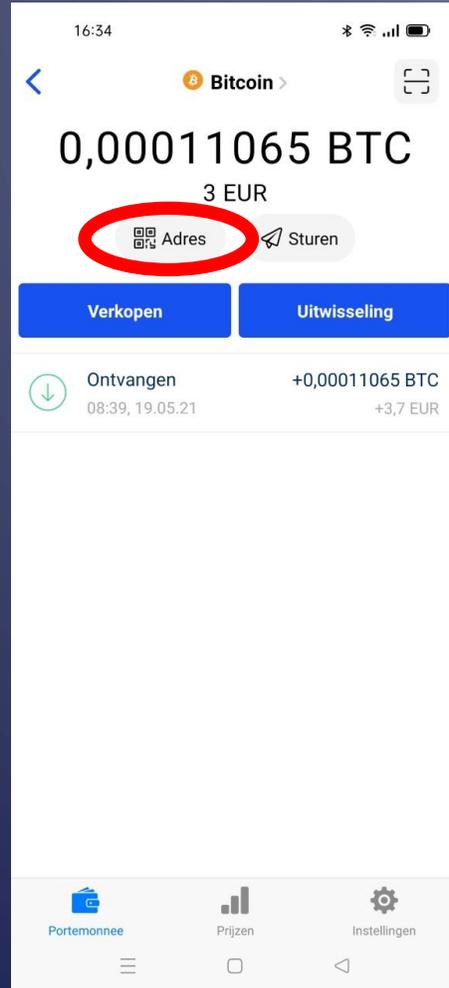
[//coinatmradar.com](https://coinatmradar.com)



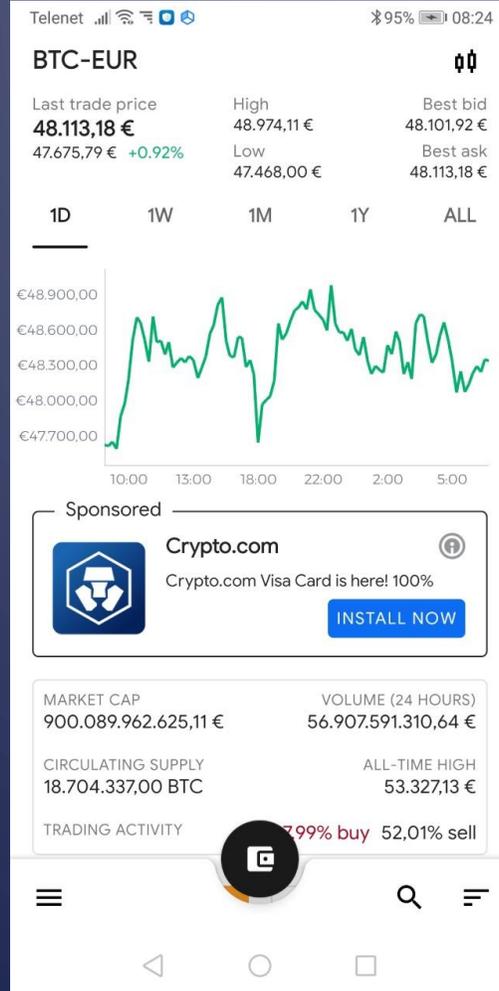
Cryptocurrency and illicit finances



Cryptocurrency and illicit finances



Cryptocurrency and illicit finances



Hello, Your Bitcoin address

Gebruik op eigen risico. Lees de [veiligheidsvoorschriften](#).

Total Balance: mBTC0.00 > ≈ EURO0.00

Request BTC | Scan QR | Send BTC

Sponsored: Crypto.com Visa Card is here! 100% [INSTALL NOW](#)

Alle betalingen [Show All](#)

Hello, Your Bitcoin address

Gebruik op eigen risico. Lees de [veiligheidsvoorschriften](#).

Total Balance: mBTC0.00 >

Om je privacy te beschermen zal het adres wijzigen zodra een betaling ontvangen is.

Sponsored: Crypto.com Visa Card is here! 100% [INSTALL NOW](#)

bc1q1ly8rf02wmk9dz5awmyxq5gvpwfdzg36hnpfeh

Cryptocurrency and illicit finances



Typology 3

Peer to peer exchange

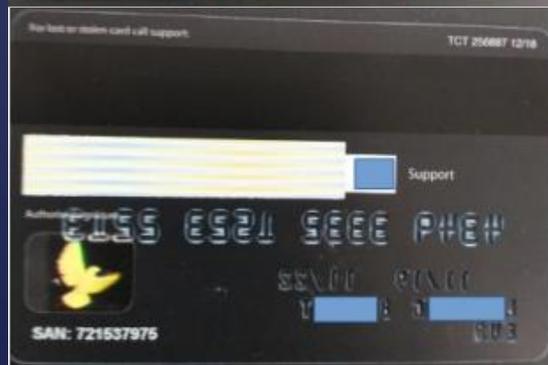
- Worldwide Brokers – contact via websites
- Buy or Sell
- Range of payment methods:
 - Bank transfer
 - Amazon gift cards
 - Cash

Cryptocurrency and illicit finances



Typology 4:

Cryptocards:



Cryptocurrency and illicit finances



Typology 4:

Cryptocards:



A – URL	https://www.bitwala.com https://app.bitwala.com
B – Location	German company located in : Bitwala GmbH Ohlauer Straße 43 10999 Berlin Germany Company registration number : HRB173698B, Amtsgericht Charlottenburg Germany Support Center Phone : +49 30 2398 0075 support@bitwala.com
c-1 – Verification of the company's credibility	BITWALA issues a non-anonymous cryptocard. It displays the currency EUR. It is delivered by standard mail. The 3D SECURE system is delivered with the card.
c-2 – Search on the card issuer	The BITWALA Mastercard has the BIN 537458 and comes from SOLARIS Bank AG in Belgium. The card is prepaid.

c-3 – Creating an account to access the order	Create an account with an email address and a password.
c-4 – Data required to identify oneself (KYC)	Bitwala only offers BITCOIN crypto-currency. The account management is done through the website or application. KYC is very rigorous. A video interview of nearly 15 minutes is conducted for the KYC verification. Security features of identity documents are verified online and questions about civil status are asked.

Cryptocurrency and illicit finances



Typology 4:

Cryptocards:



A – URL	https://advcash.gi https://wallet.advcash.com
B – Location	Russian company located in : ADV PROJECT LTD Suite 16, Block 5, Watergardens, GX11 1AA Gibraltar
c-1 – Verification of the company's credibility	ADVCash delivers a non-anonymous cryptocard. It displays the currency EUR. The 3D SECURE function is not specified and has not been tested. It is delivered by DHL.
c-2 – Search on the card issuer	ADVCash's VISA card has the BIN 434933. The banking service provider is Laurentian Bank in CANADA. This is a prepaid card.

c-3 – Creating an account to access the order	Create an account with an email address and password
c-4 – Data required to identify oneself (KYC)	8 cryptocurrencies are available, including Bitcoin, Ethereum, Litecoin. The account management is done through the website or application. The latter, it is not in the Playstore but on the website appsgeyser.io by allowing data from an unknown source to be downloaded.



Canada

U.K.

Russia

Brazil

?



LET'S BREAK OUT!



OECD International Academy for Tax and Financial Crime Investigation
Managing Financial Investigations



How would you launder your dirty money, using crypto's?

Group 1 & 2: You've got 5.000.000,00 EUROS in cash, the profits of you selling narcotics.

Group 3 & 4: You've got 5.000.000,00 EUROS dirty money in a Swiss bank account, the results of tax crimes.



Benefits to criminals



- Accounts can't be frozen if identified



- Exchanges without KYC (know your customer)



- Limited law enforcement skillset



- Decentralised nature avoids reporting mechanisms

- Bitcoin ATM's and smurfing



Benefits to criminals



- Pseudo-anonymous nature of crypto

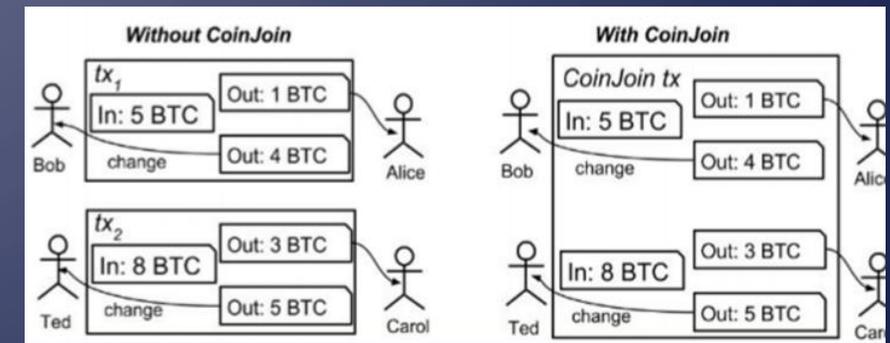
- Easy to carry and store

- Availability of additional layers of anonymity mixer/coinjoin

- Privacy coins

- Easy to move internationally

- Bitcoin traders – no central party

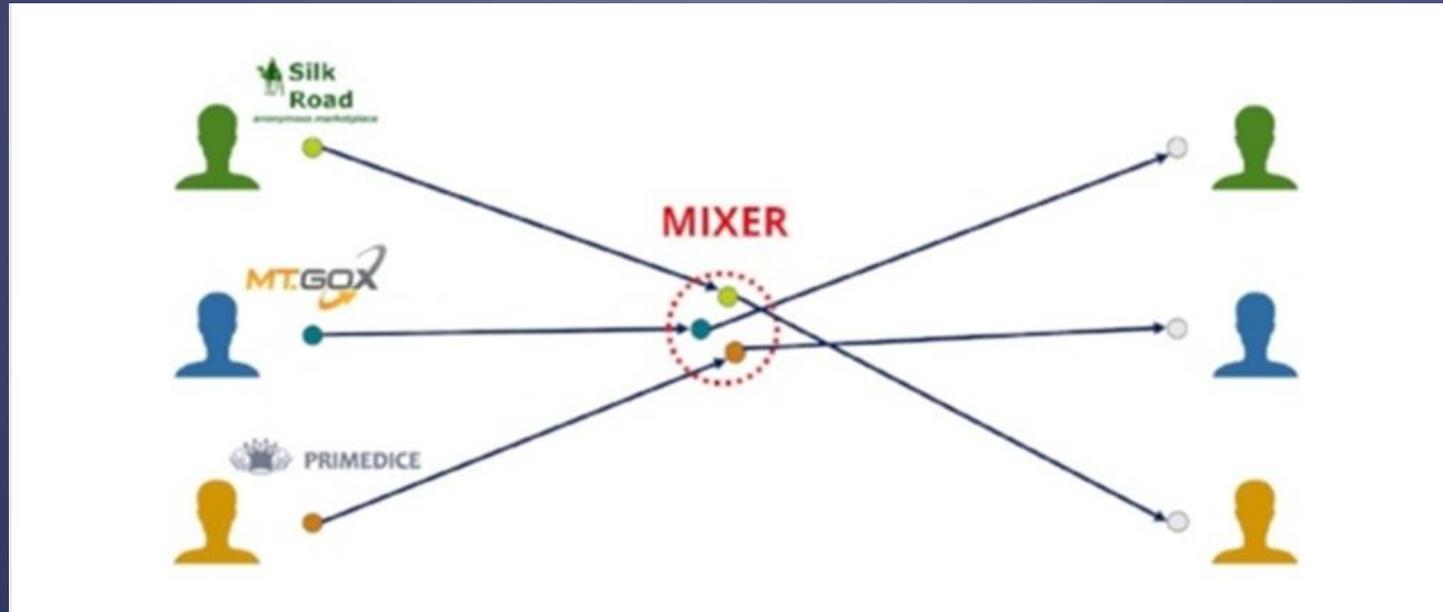


TAX EVASION

- There is certainly the potential for individuals to use cryptocurrency as a means of hiding assets to avoid paying tax. Enforcement agencies are behind the curve currently on how to tackle this issue. The IRS in the USA have taken to demanding records from exchanges to identify users. Others are still uncertain on what constitutes a taxable event and what doesn't.
- The main issue for agencies is identifying who owns cryptocurrency assets and what action they are taking with them. Protocols with a strong stance on privacy make this very difficult and savvy users could look to take advantage of this.
- The problem for users is turning assets into cryptocurrencies without leaving a trace for regulators. Recent research outlines “Large receipted sums are difficult to manage or spend anonymously , and cryptocurrencies still require infrastructure to manage and spend.” (RAND, 2019). This is corroborated by the detail above highlighting that exchanges are being pursued by enforcement agencies for user information.



Bitcoin mixing - Coinjoin



A (highly-simplified) view of what happens on a bitcoin mixer: enabling its users to break the link to the source of their bitcoins.

Used efficiently bitcoin mixing or “coinjoins” can break the audit trail and make it very difficult to attribute ownership of the assets. There is however a caveat to this, the user must know how to safeguard their privacy at each step of the process.

Bestmixer vs money laundering



BESTMIXER

Introduction ▾ Fees FAQ Resources ▾ Contacts

BESTMIXER.MX - TOP RATED SECURE BITCOIN MIXER

MIX YOUR BITCOINS TO STAY SAFE AND PROTECTED

Select the asset and start coin mixing

 Bitcoin

 Litecoin

 Bitcoin Cash

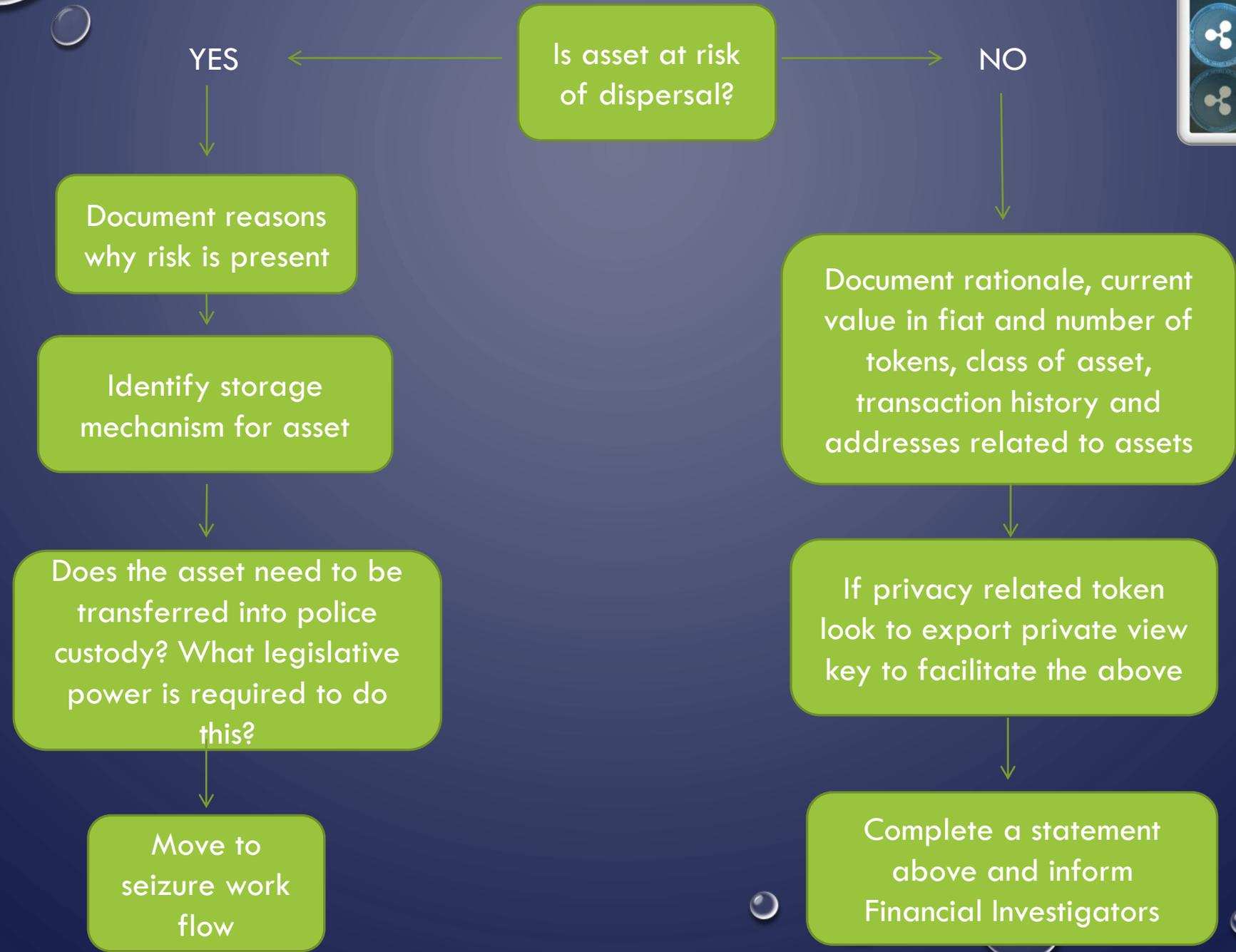
 NEW! Ethereum

...or watch the tutorial video on [YouTube](#) how to use a bitcoin mixer

CONSIDERATIONS PRIOR TO SCENE ATTENDANCE



- **WHAT INTELLIGENCE HAS BEEN RECEIVED INDICATING THE SUSPECTS INVOLVEMENT IN POSSESSION/USE OF CRYPTOCURRENCY?**
- **HOW IS CRYPTOCURRENCY USED IN THE CRIMINAL ACTIVITY IDENTIFIED? WHAT POTENTIAL INSIGHTS DOES THIS PROVIDE ON HOW CRYPTOCURRENCY WILL BE STORED BY THE SUSPECT?**
- **WHAT SECURITY MEASURES MAY THE SUSPECT HAVE PUT IN PLACE? WHAT OPPORTUNITIES ARE THERE TO OVERCOME THESE?**
- **HOW WILL WE AIM TO IDENTIFY CRYPTOCURRENCY ASSETS HELD BY THE SUSPECT? E.G. COMPUTER EXAMINATIONS, MOBILE PHONE SEIZURE, SEARCHES FOR RECOVERY SEEDS AND HARDWARE WALLETS**
- **WHAT TOOLS AND PROCESSES WILL BE USED TO CONFIRM WHAT ASSETS ARE HELD BY THE SUSPECT? E.G. SEARCHES OF ADDRESSES ON WEBSITES, USING RECOVERY SEEDS, OPENING WALLET SOFTWARE ON DEVICES.**
- **WHAT EQUIPMENT IS NEEDED TO SUCCESSFULLY COMPLETE A SEIZURE IN THE CIRCUMSTANCES?**
- **CAN WE GUARANTEE ACCESS TO THE INTERNET?**



Document reasons why risk is present

Identify storage mechanism for asset

Does the asset need to be transferred into police custody? What legislative power is required to do this?

Move to seizure work flow

Document rationale, current value in fiat and number of tokens, class of asset, transaction history and addresses related to assets

If privacy related token look to export private view key to facilitate the above

Complete a statement above and inform Financial Investigators

Seizure at scene of physical entity containing keys to cryptocurrency assets.

1. Seize the medium containing the private key/recovery seed. This can be paper wallets, hardware wallets, written records of recovery seeds etc.

2. Seize the passwords/codes related to wallets. Consider any 2FA devices which might be required

3. If any public keys/asset addresses are visible check for values on a block explorer. Record these and any transaction history displayed.

4. When placing passwords/codes, paper wallets and private keys/recovery seeds in exhibit bags ensure they have been placed in an envelope first. This envelope should be sealed at this point.

5. Exhibits should be brought to a safe place such as a virtual currency safe at a secure location as soon as possible.

Inform Financial Investigators of seizure

VIRTUAL CURRENCY SEIZURE



HM Revenue
& Customs

POINTS TO CONSIDER



It will not always be necessary or advantageous to seize the cryptocurrency asset. It might be of such limited value that it does not seem appropriate to seize. Alternatively we may feel other actions we have taken has sufficiently secured the asset. This is a discretionary decision for the individual completing the process. However it is important on each occasion to provide a clear policy log detailed the rationale for decisions made.

It is necessary on ever occasion to fully record the transaction history, addresses linked to the wallet and amount of cryptocurrency remaining. The matter can then be discussed with FI's at a later point to identify if there are any proceeds of crime opportunities over historic values or holdings of the asset etc.

Some wallet applications may have different transaction histories, transparent and shielded. Always check for this. It's possible that hardware wallets will have hidden accounts on them. These usually have a 25 word recovery seed. Check the scene for anything of this nature to help identify this.

POINTS TO CONSIDER



- **PLANNING AN INVESTIGATION STRATEGY IS AN IMPORTANT PART OF EFFECTIVELY INVESTIGATING SUCH OFFENCES. AS THE SAYING GOES FAIL TO PREPARE, PREPARE TO FAIL!**
- **THIS EXERCISE SHOWS HOW BLOCKCHAIN ANALYSIS IS NOT A SIMPLE SUBJECT. THERE IS A LOT OF NUANCE AND IT IS NOT A QUICK ENQUIRY. THIS IS WHY IT IS IMPORTANT TO HAVE A PROCESS THAT ALLOWS YOU TO REVISIT INFORMATION AND SPEND TIME ANALYSING IT. THE INVESTIGATION STRATEGY ALSO NEEDS TO RECOGNISE THIS AND SEEK TO EXPLORE EVERY OPTION AVAILABLE TO PROGRESS THE CASE.**
- **IT ALSO SHOWS HOW QUICKLY YOU COULD GET LOST AS ANALYSING OVER 4,000 TRANSACTIONS IS NOT EASY! THIS IS WHY PARAMETERS ARE IMPORTANT. ALSO IDENTIFYING TECHNOLOGY WHICH CAN HELP WITH ANALYSIS IS KEY TO GETTING THE BEST EVIDENCE OUT OF SUCH ENQUIRIES.**
- **THERE ARE POSITIVES IN COMPLETING BLOCKCHAIN ANALYSIS IF IT CAN BE MANAGED EFFECTIVELY. IT CAN HELP WITH IDENTIFYING SIGNIFICANT EVIDENCE FOR MONEY LAUNDERING INVESTIGATIONS. WE CAN TELL HOW MUCH HAS GONE TO AN ACCOUNT, HOW REGULAR ACTIVITY HAS BEEN, WE CAN USE DATES/TIMES TO COMPARE AGAINST OTHER RELEVANT INFORMATION E.G. TIMES OF OFFENCE OR BANK STATEMENTS.**

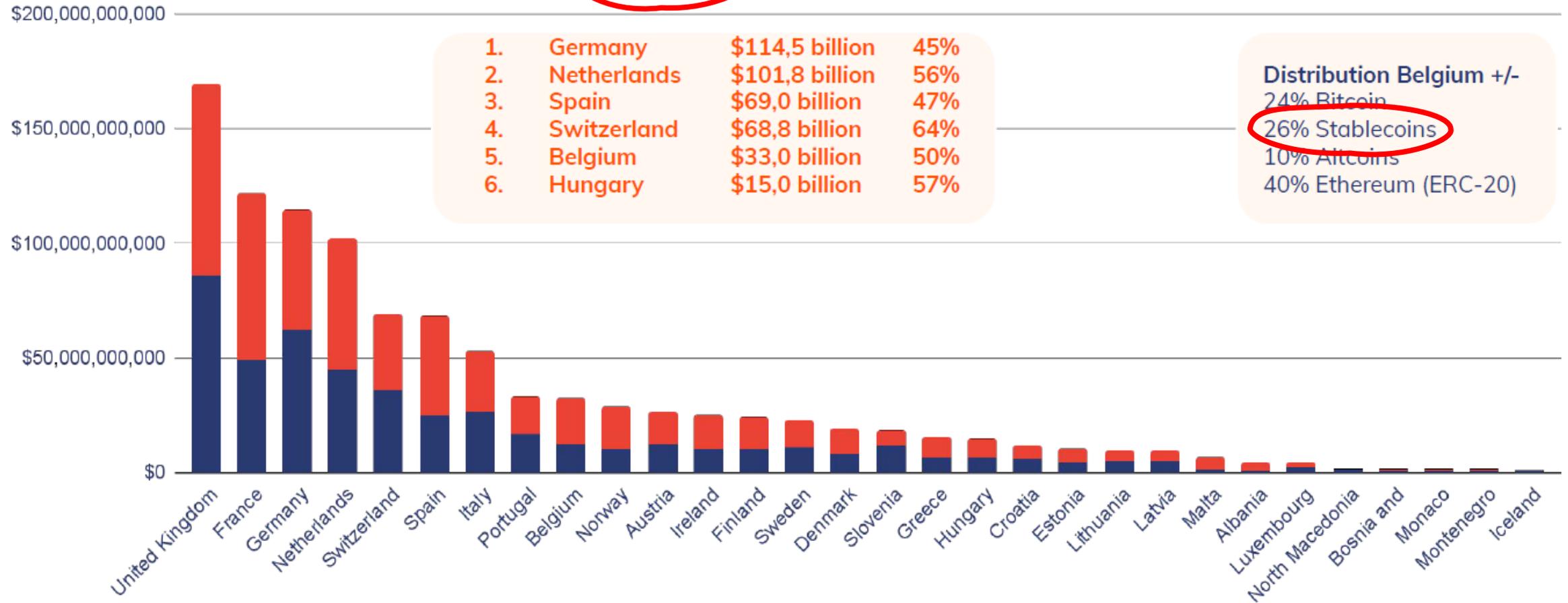
Your countries combined received \$401 billion in estimated value between July '20 and June '21 (12 months)

Central, Northern & Western Europe's cryptocurrency value received by country



July '20 - June '21

DeFi protocols Centralized services



1.	Germany	\$114,5 billion	45%
2.	Netherlands	\$101,8 billion	56%
3.	Spain	\$69,0 billion	47%
4.	Switzerland	\$68,8 billion	64%
5.	Belgium	\$33,0 billion	50%
6.	Hungary	\$15,0 billion	57%

Distribution Belgium +/-
24% Bitcoin
26% Stablecoins
10% Altcoins
40% Ethereum (ERC-20)

A stablecoin is a class of cryptocurrencies that attempt to offer price stability and are backed by a reserve asset.



Stablecoin has gained attraction as they attempt to offer the best of both worlds. The instant processing and security or privacy of payments of cryptocurrencies, and the volatility-free stable valuation of fiat currencies!



STABLECOINS

There are 2 types of stablecoins:

- Fiat collateralized stable coins maintain a fiat currency reserve (USDT, USDC)
- Crypto-collateralized stable coins are backed by other cryptocurrencies (DAI/ETH)



Decentralized Finance

DeFi

Decentralized finance (or "DeFi") is a financial ecosystem based on blockchain technology. It lets users buy and sell assets and financial services as a form of investment or financing without middlemen.

DeFi uses blockchain, which connects users without a central server and can transfer data and assets securely, under the users' own watch. Transactions are regulated under "smart contracts", computer programs that also use blockchain and run automatically when the parameters the parties set in advance are met.

They use blockchain to store and transfer digital assets and smart contracts to make sure the parties keep their end of the bargain.

Decentralized Finance

DeFi

What applications are there within DeFi?

Staking

Staking stands for: storing crypto coins in a wallet for a fixed period of time. By staking you earn a kind of interest that you get deposited in your wallet. The reward you earn from betting cryptocurrency depends on the length of time you hold it. The longer the betting time, the higher the return. It is similar to a fixed deposit in the traditional banking system that is rewarded at the end of the period with a defined interest rate, as stipulated in the contract.



Decentralized Finance

DeFi



What applications are there within DeFi?

Lending

Lending stands for (temporarily) lending your cryptocurrencies to a platform. This platform then grants loans to companies or private individuals, without the intervention of intermediaries. At the same time, the DeFi lending protocol makes it possible for anyone in the world, anywhere, to earn interest from crypto they lend.



Decentralized Finance

DeFi

DEFI LENDING AND BORROWING WORKS

COINJOKER

