Introduction to Monero

And a lesson in privacy and coin equality

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Compliance Analyst, DV Chain

MONERO is:

a community-driven,

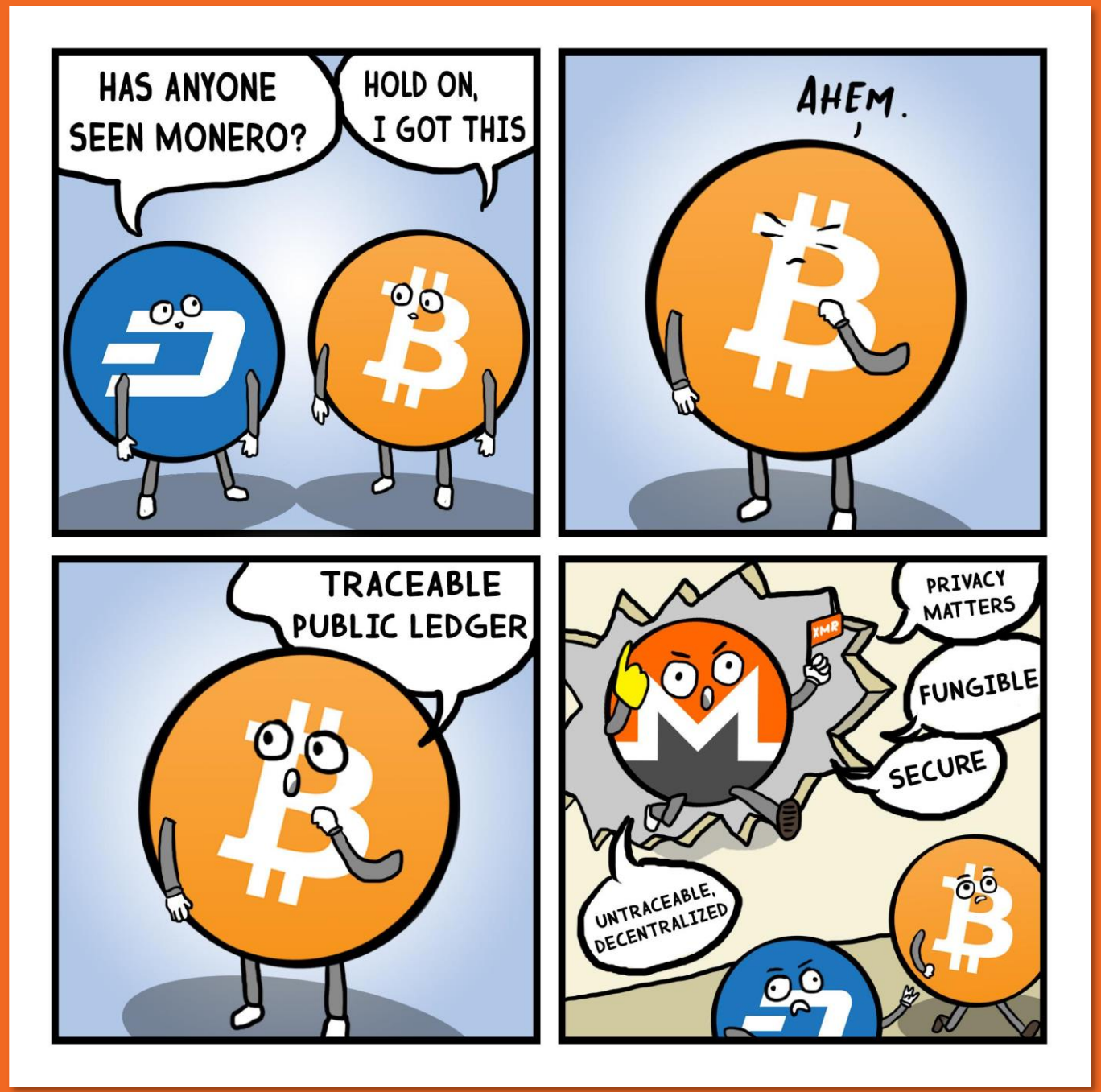
open source project that

makes safe digital cash

and owns up to its shortcomings

You may have met a Monero enthusiast in a situation like this:

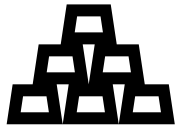
(We can't help it)



Source: https://www.reddit.com/r/moonero/comments/7h6ame/monero_in_da_house/

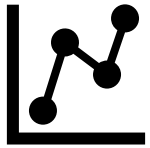
Real Problems Monero Addresses

Strong,
ubiquitous
privacy



Coin equality
(fungibility)

Accessible
PoW mining
(RandomX)



Adaptive
block size and
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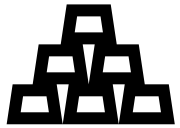

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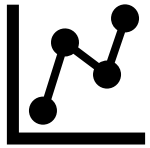

Adaptive
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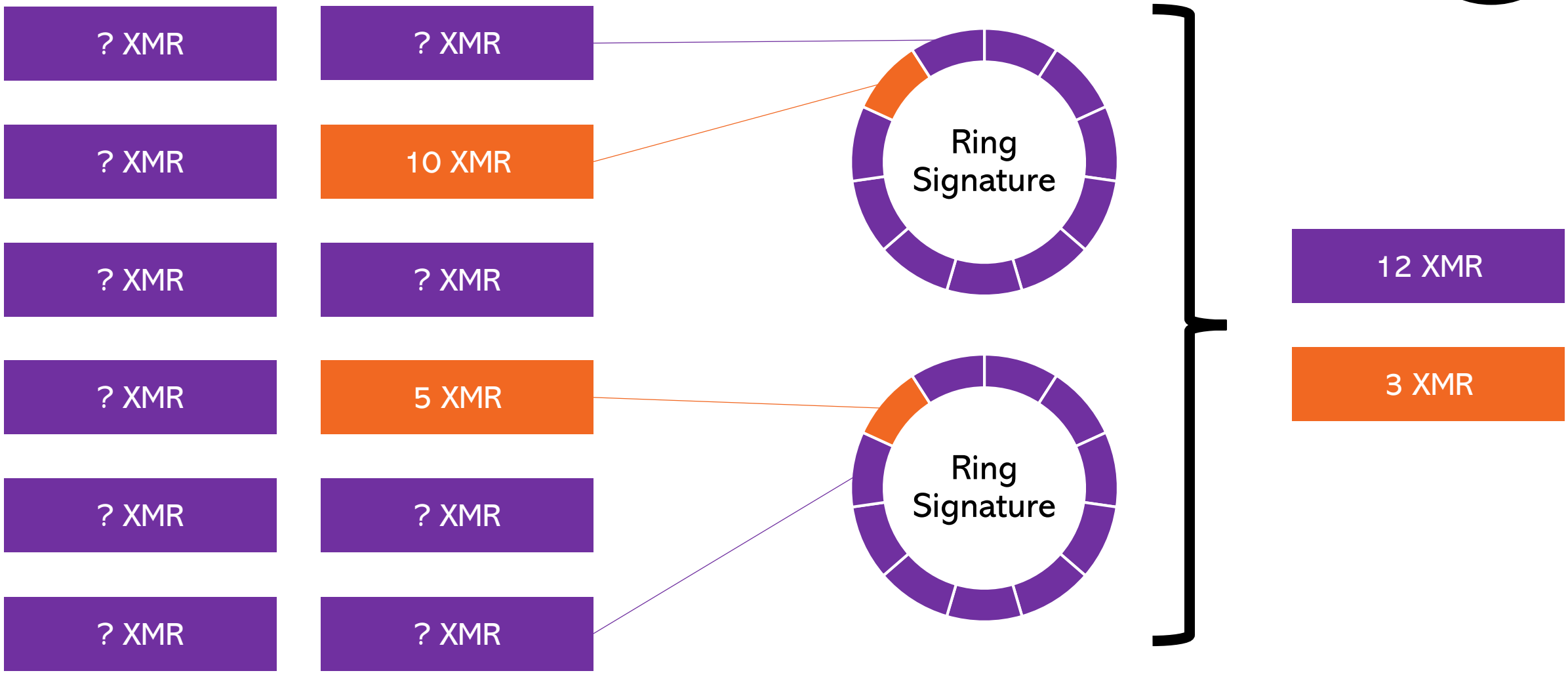
Cryptocurrency network privacy is less than the sum of its parts

Transaction Structure and Tracing



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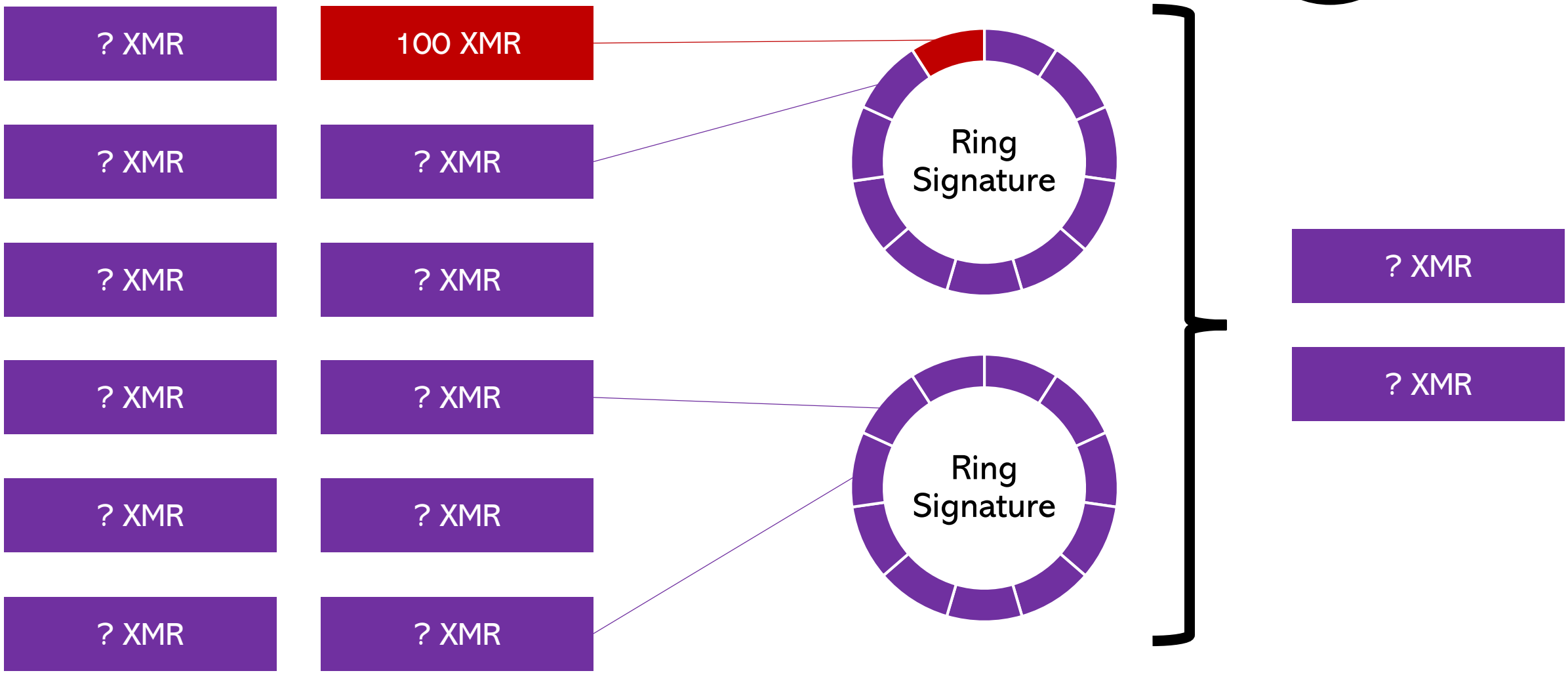
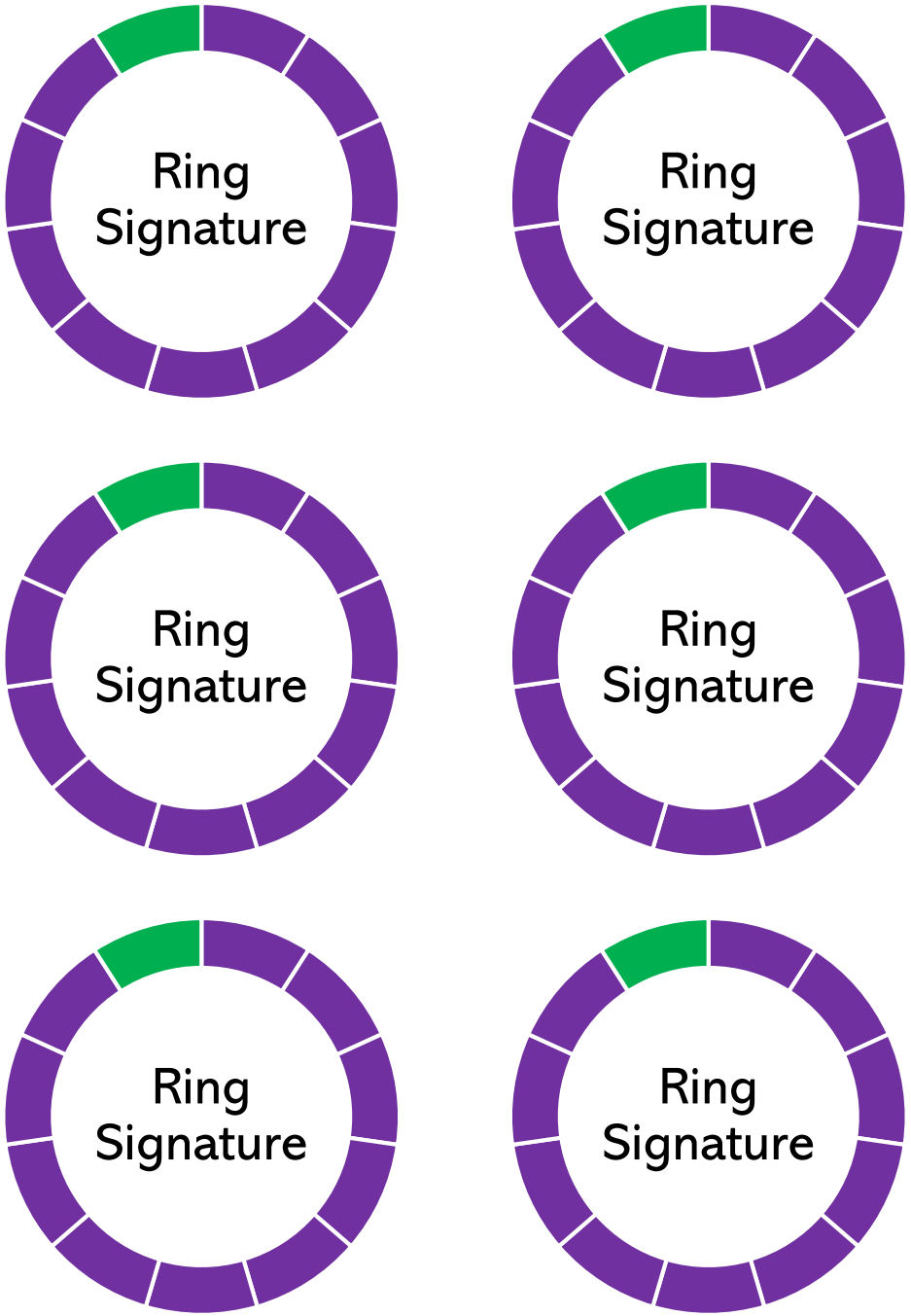


Transaction Tracing



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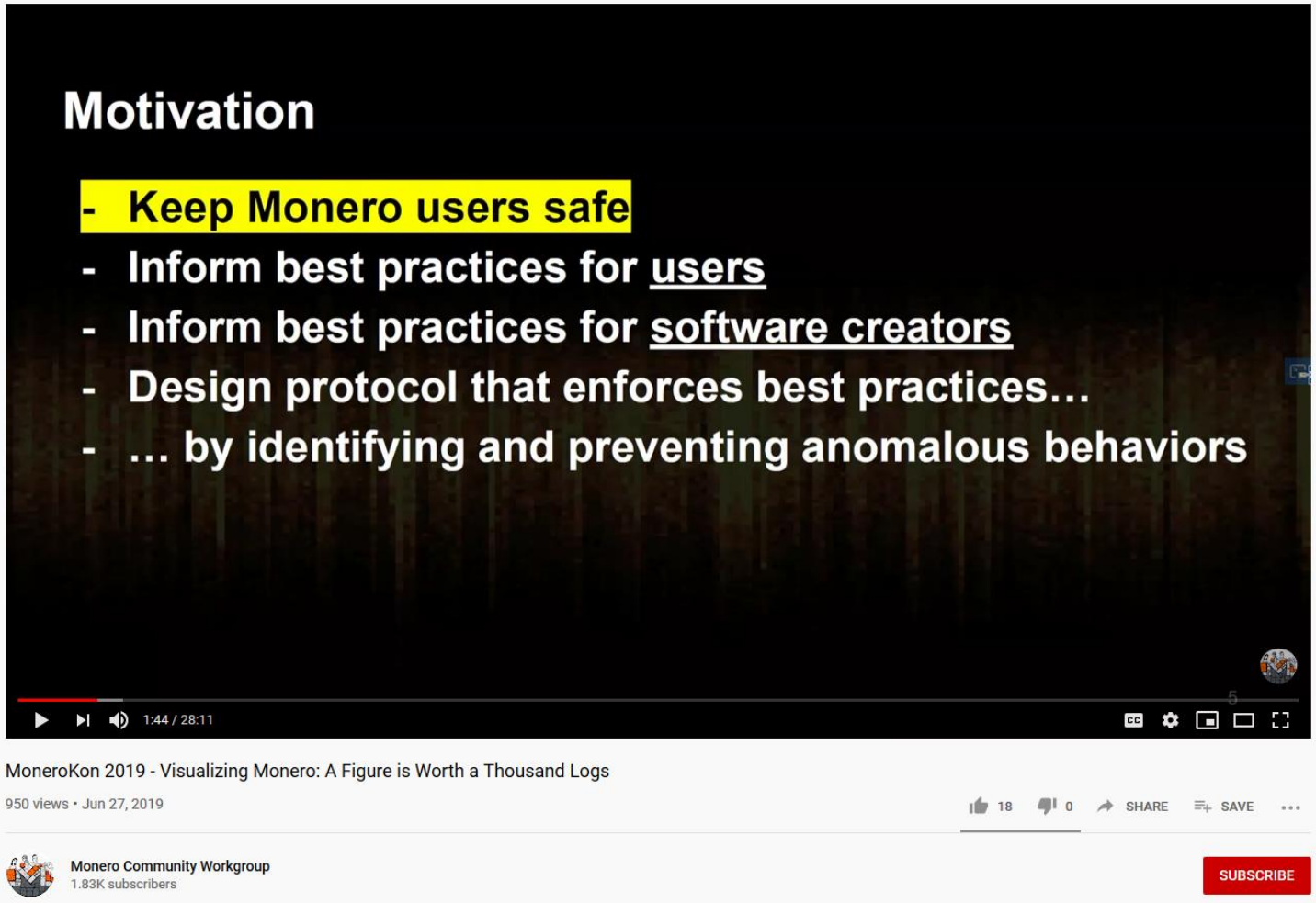
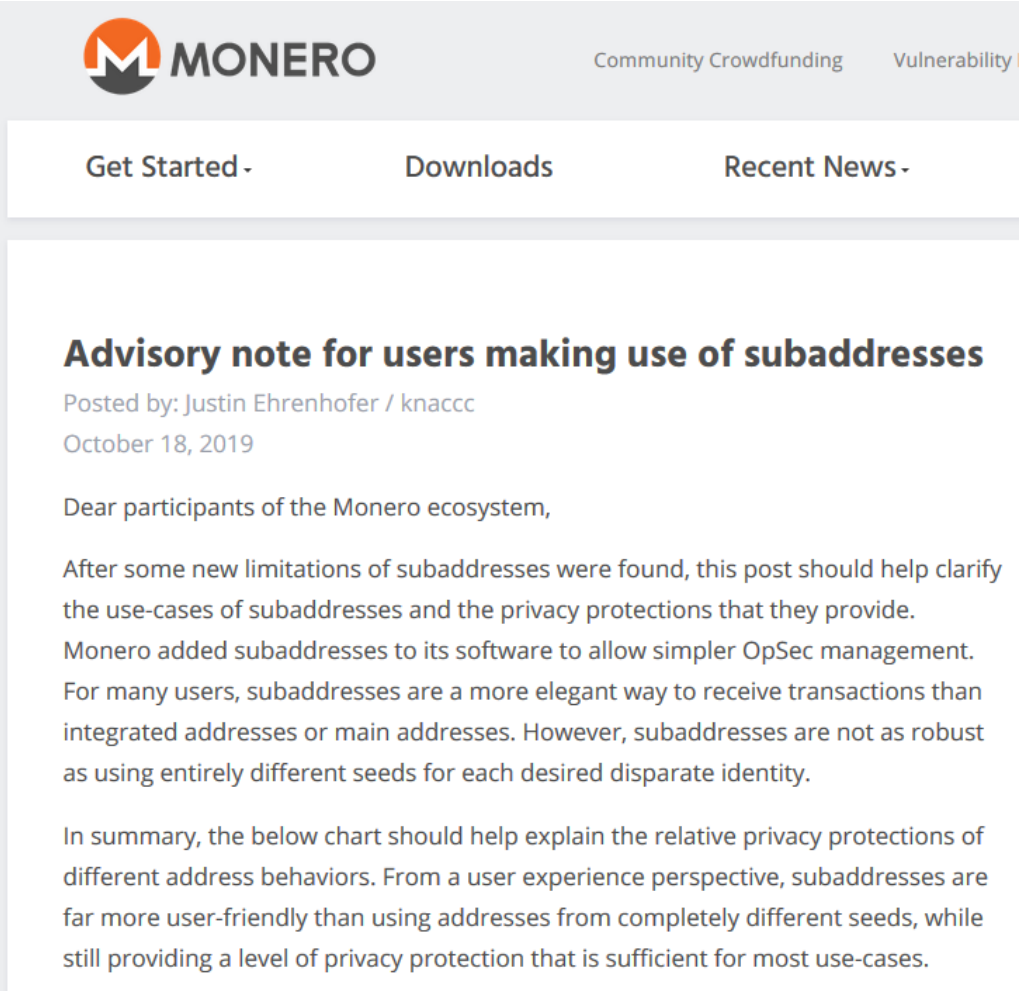
Monero has
REAL privacy, not
POTENTIAL privacy

If there are issues with privacy, we discuss and patch them openly, not blame users





Optional
CoinJoin
zkSNARKs
Lelantus
CoinSwap
PerfectlyPrivate™

is a bad solution for the wrong problem

Results of a fungibility exercise

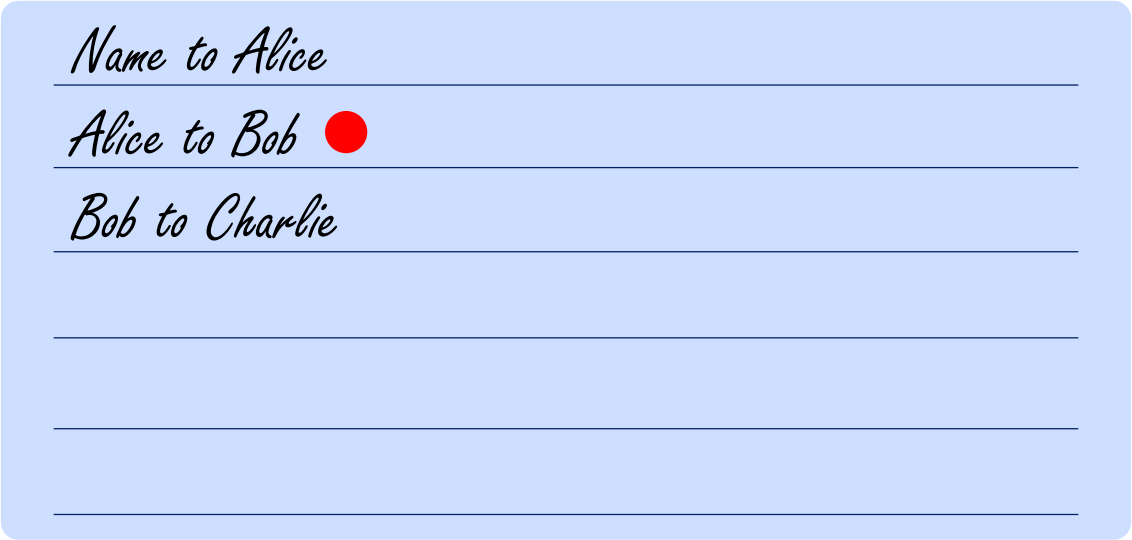
Name to Alice

Alice to Bob

Bob to Charlie

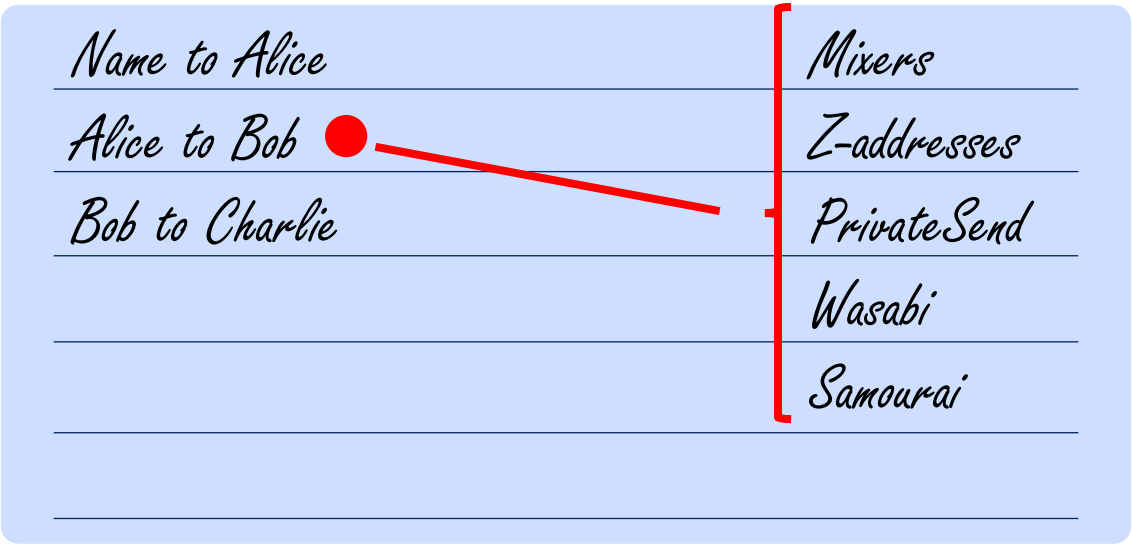
Results of a fungibility exercise

- People avoided the tainted cards
- Some would only accept tainted for “something extra”
- Most people would pay more for “fresh cards”
- In reality, who among the attendees pays for Chainalysis?

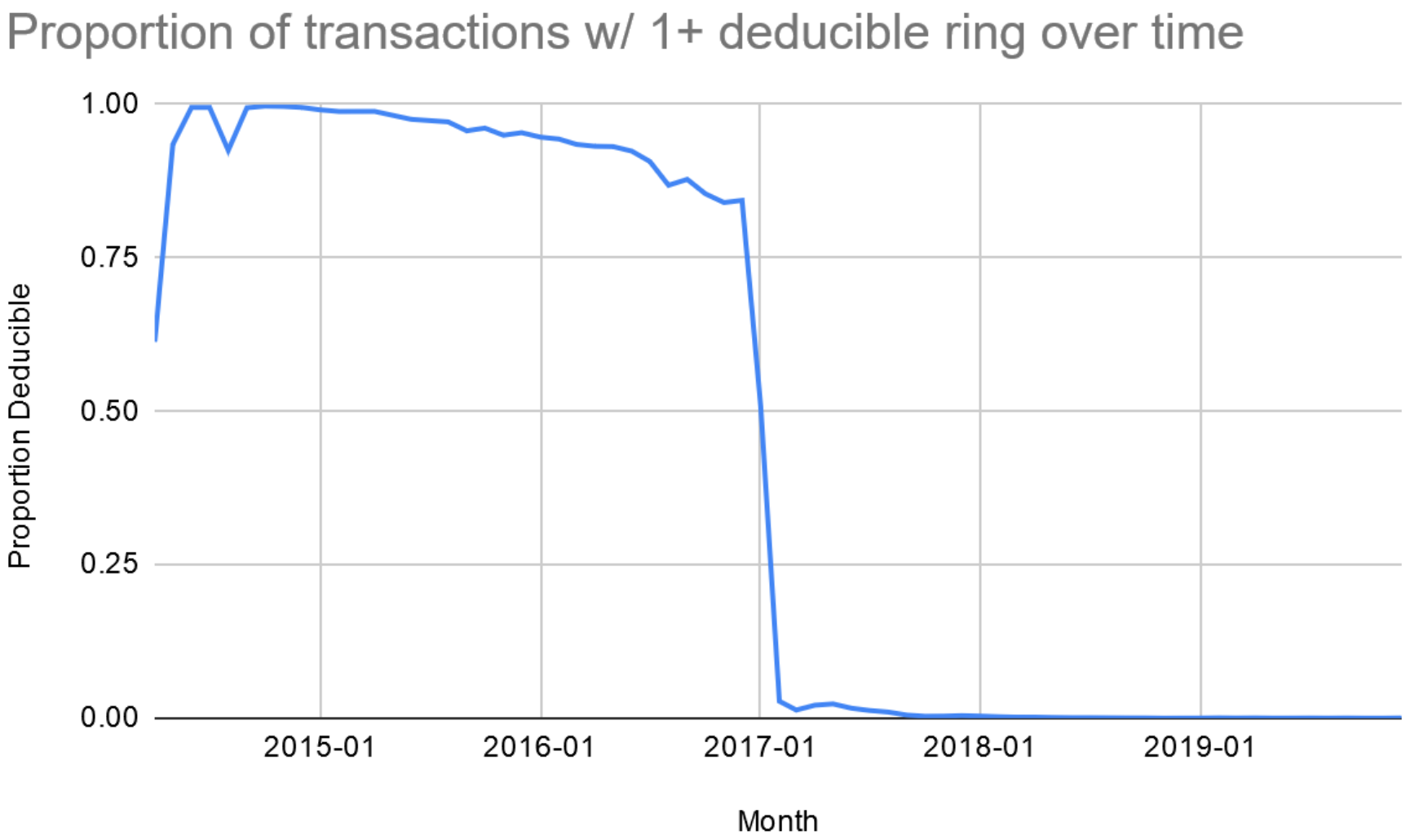


Reality

- Chain analysis companies will most likely mark the use of any optional privacy as higher risk (this is enforced by several tools)
- Mandatory mining to shielded doesn't fix
- Optional privacy often harms fungibility, not helps

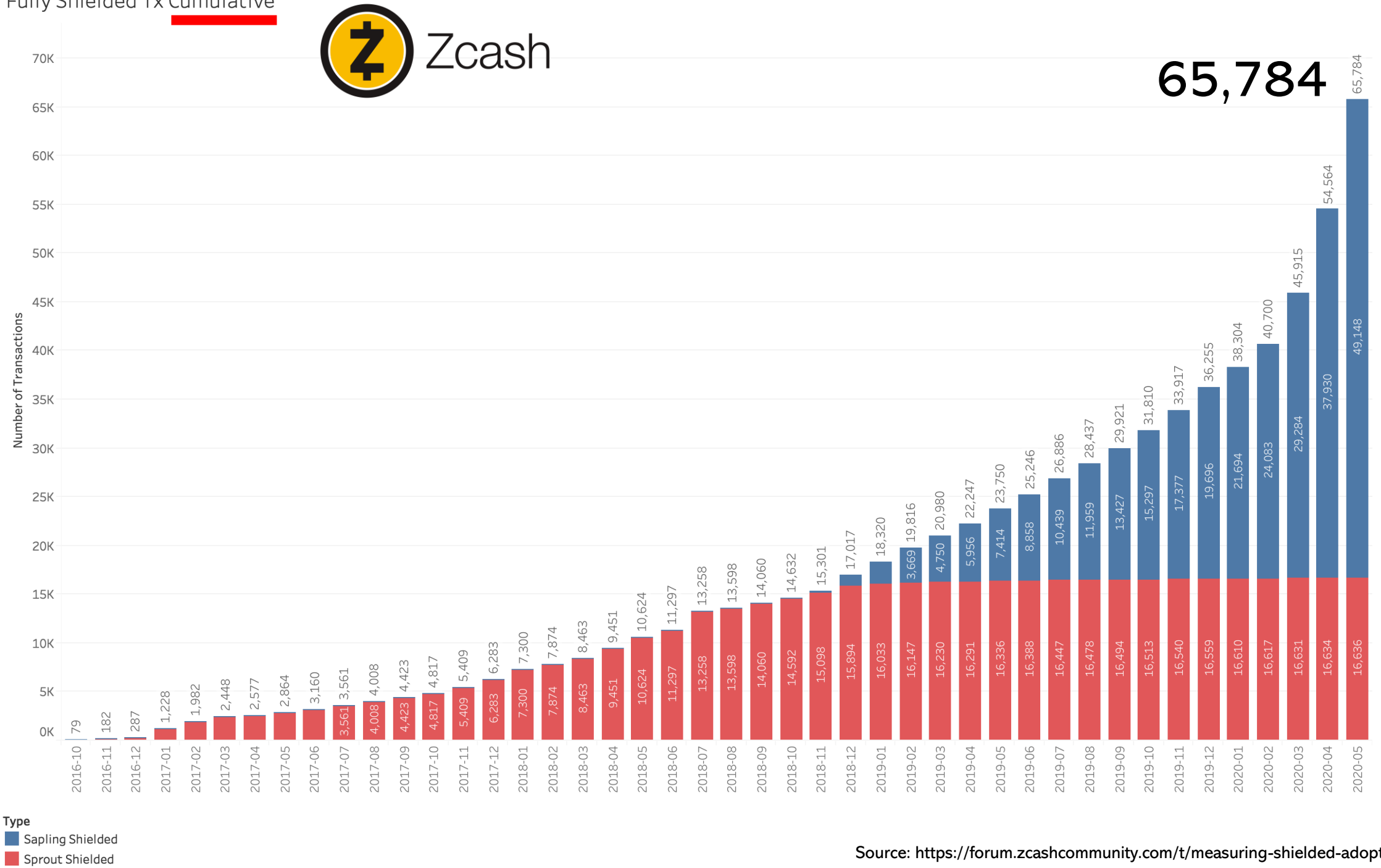


Privacy is hard. Coin equality is harder.



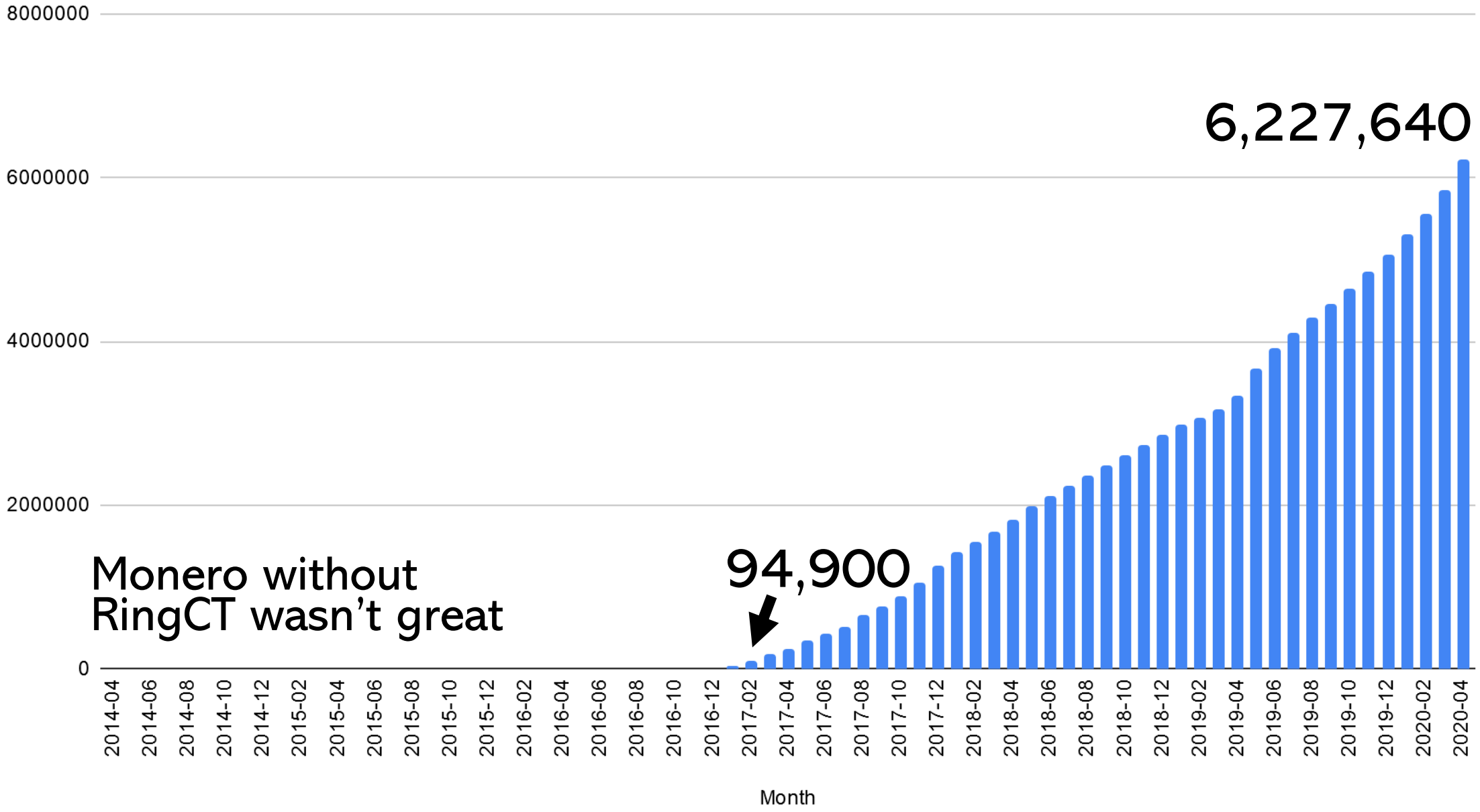
Source: Sarang Noether of Monero Research Lab using blockchain data

Fully Shielded Tx Cumulative



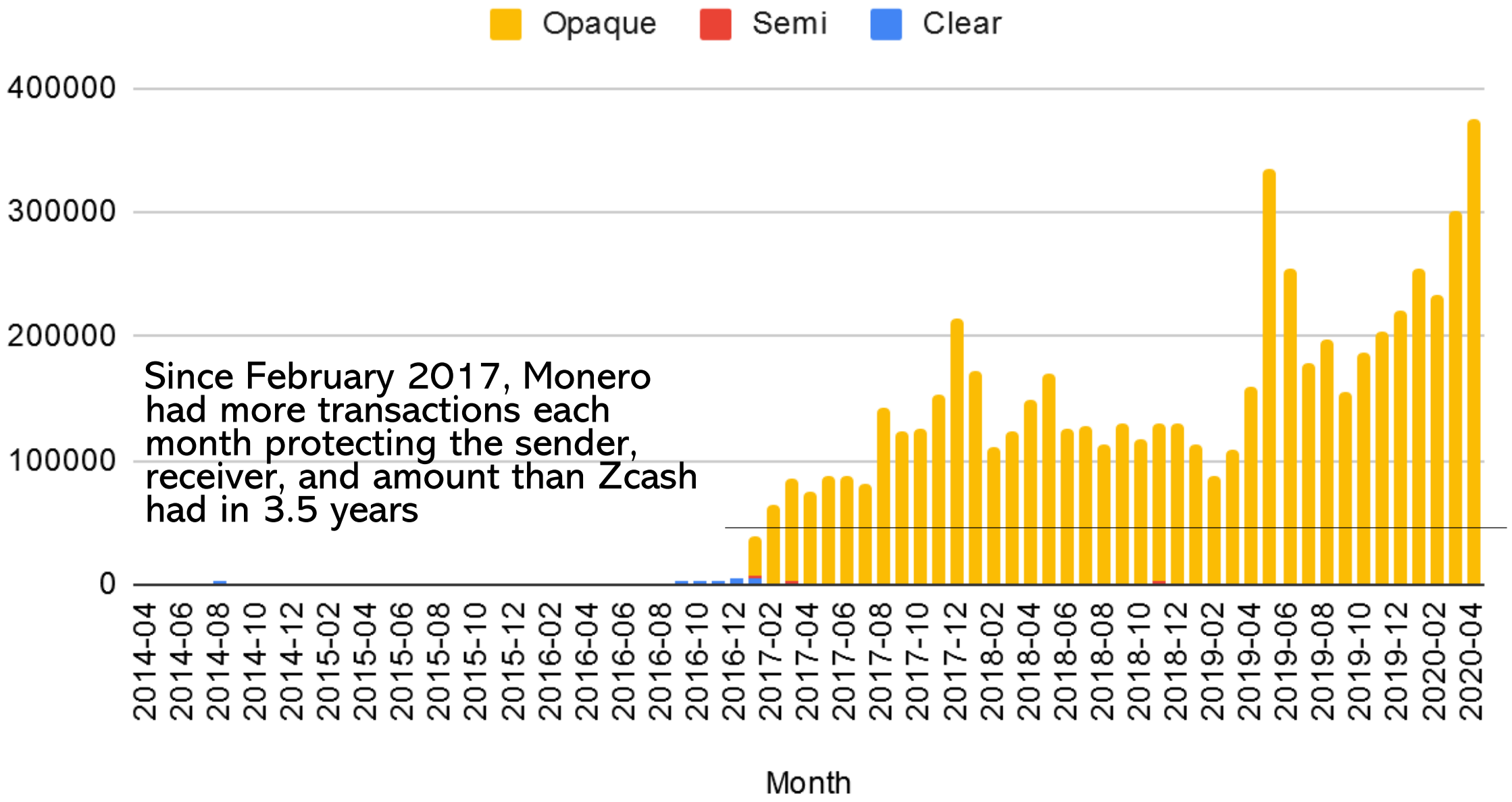
Source: https://forum.zcashcommunity.com/t/measuring-shielded-adoption/35022

Cumulative transactions w/o deducible ring and hidden amount



Source: blockchain data from Sarang Noether of Monero Research Lab

Transactions w/o deducible ring



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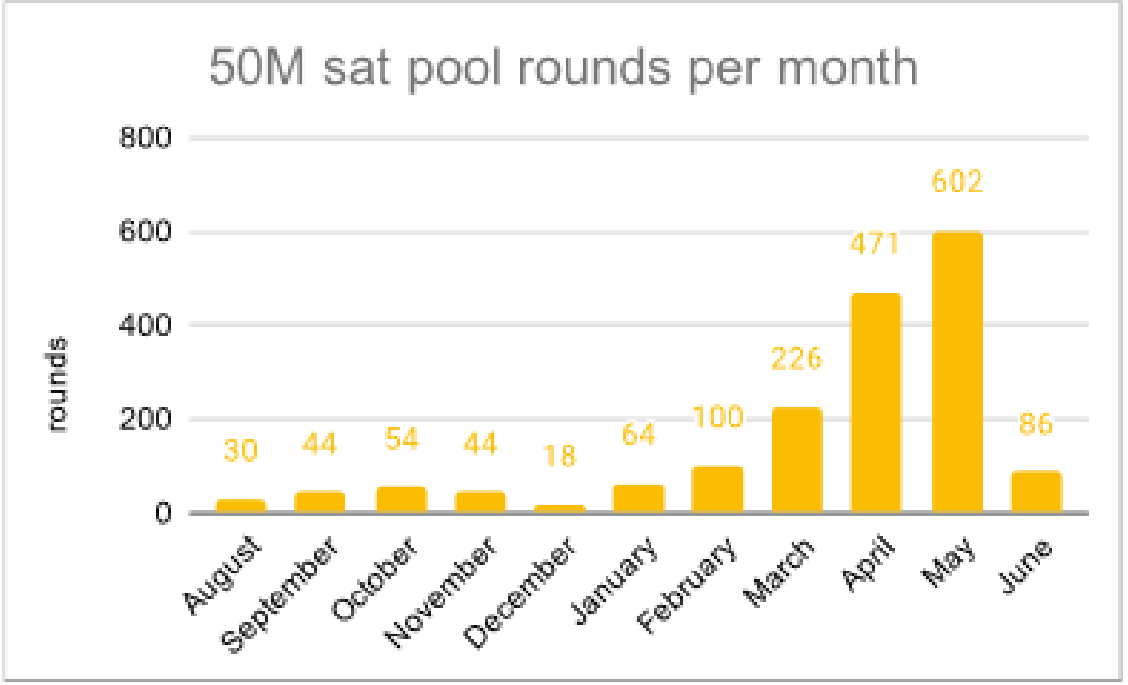
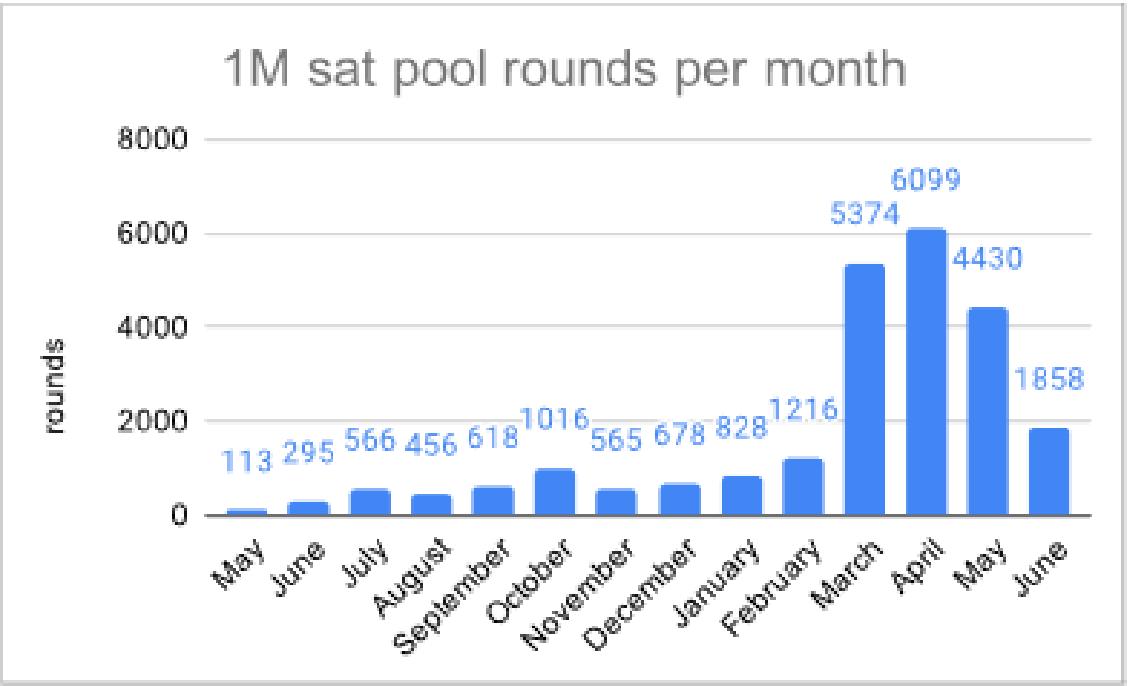
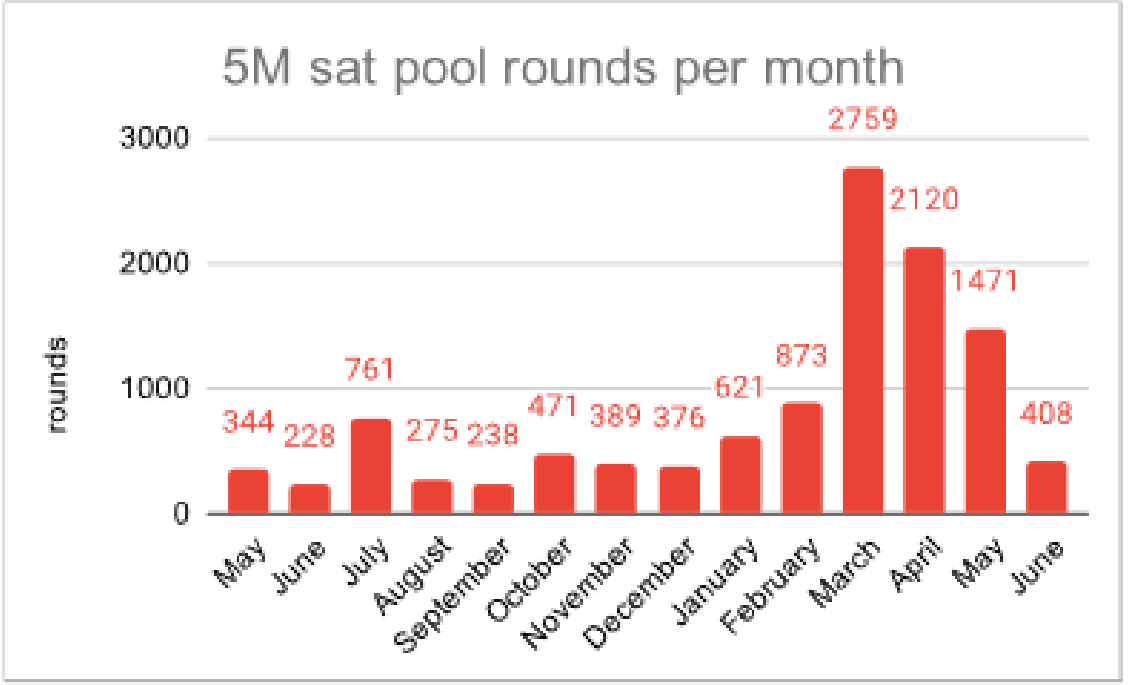
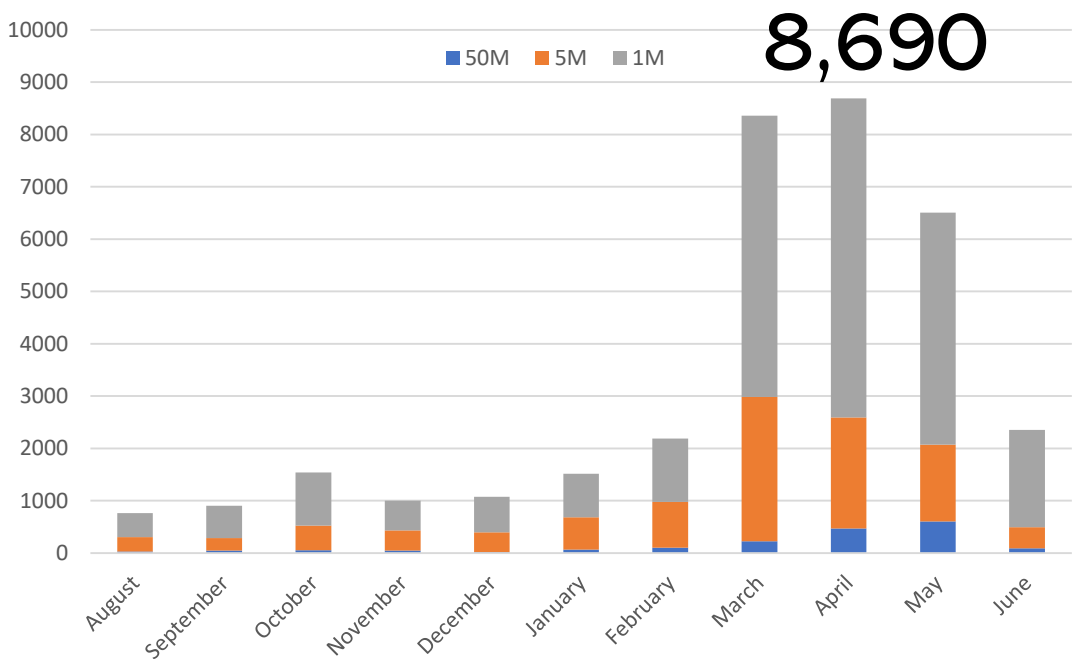








Source: https://mattodell.keybase.pub/whirlpoolstats.pdf

What's next?

Today

<6 months

~12-18 months

Image credit
Edge Wallet

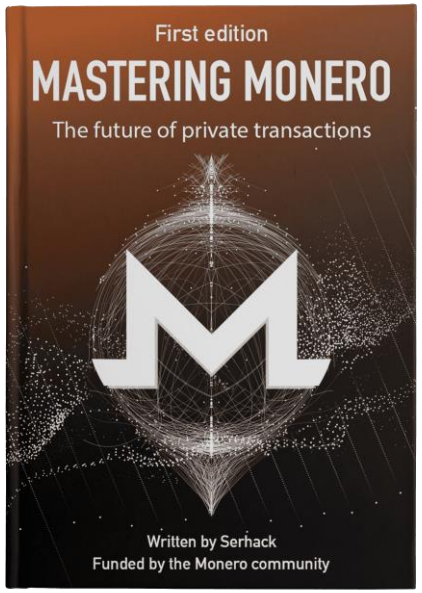
CLSAG

More efficient transactions

Arcturus, Triptych

Larger ringsizes 128-256

How YOU should participate



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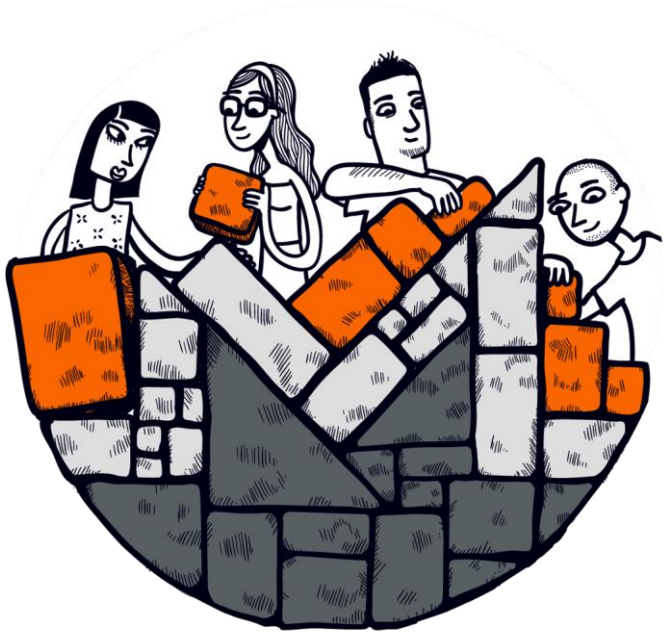
masteringmonero.com

moneromeans.money

Get started

cakewallet.com



Join the community

communityworkgroup.org

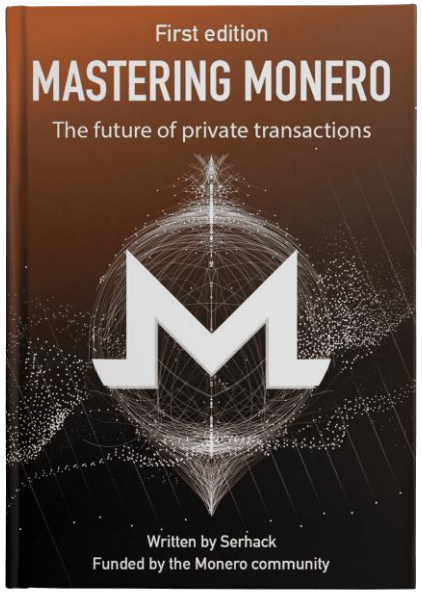
Cake Wallet sponsored this meetup. Mastering Monero provided 3 free books for a giveaway.

Conclusion

- Monero transactions use ring signatures and stealth addresses
- Monero beginners have reasonably strong privacy by default
- Privacy needs to be thought of on a network implementation basis, not on a single-user basis
- Monero is the only network that seems to care about real privacy
- Monero is the only network that prevents mass surveillance
- Watch for more efficient transactions soon, and much larger ringsizes in the medium-term future

Questions?

justin@ehrenhofer.org
@JEhrenhofer



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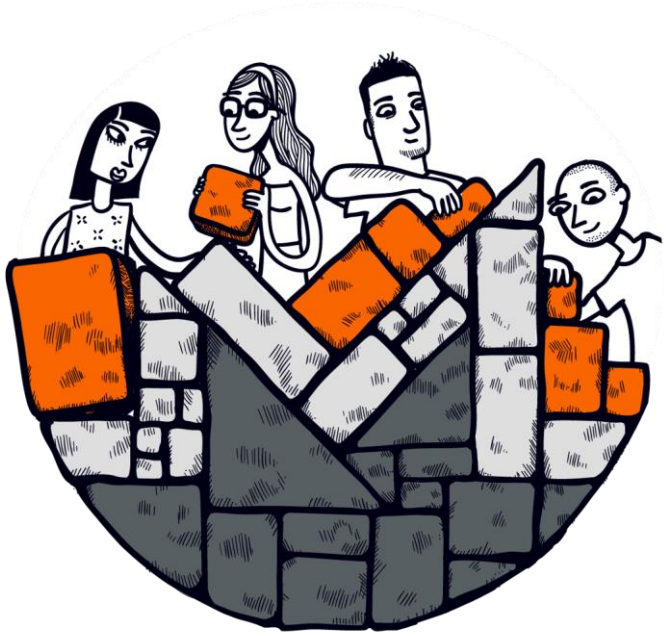

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