Money, Fraud, and Bitcoin.

Ethan Heilman

IVTFs such as Hawala, Hundi, 飞钱 (flying money), Black Market Peso Exchange.

101092 **Bombay Province** 6 As. NO. Rs. 2500 DUE 10-7-1951 BOMBAY 12-4- 1951 (86) Eighty days after date we. promise to pay to Seth Manground Bhaqwandes. or order the sum of Rupees (2500) Two Thousand Five Hundred only for value received in cash this day. 9. Bhupet Bhuren yokhle aboad (North) Parinet. Jadar Bombay-28 Brokers K. LACHHMANDAS KINGER

- Used for over 4000-5000 years.
- Probably very similar to ancient debt systems.
 - ~100 Billion transferred annually and growing.

Hawala in Action.



Frank Abagnale

	DONALD E. KNUTH COMPUTER SCIENCE DEPARTMENT STANFORD UNIVERSITY STANFORD, CA 94305-9045 Date 24 Aug oz 11-3167/1210 01
A A A	Pay to the <u>Gabriel Valiente</u> \$ 7.56 Two and <u>S6 /100</u> Dollars Description
	$\frac{1}{121031673:101501155849061"}$
-V//	

Credit Cards



Blockchain



Exploring the Blockchain

http://blockexplorer.com/

Bitcoin



Block Races



Forks







Is Bitcoin Anonymous?

No, Bitcoin is Pseudo-Anonymous.





Anonymous

Pseudo-Anonymous

Transaction Graph



As The FBI says...

"(U) Bitcoin s anonymity depends on the actions of the user. While some news articles have lauded Bitcoin □untraceable digital currency, the □About Bitcoin □ page on bitcoin.org does not list anonymity as a feature as of the currency. All Bitcoin transactions are published online and Internet Protocol (IP) addresses are linked to the public Bitcoin transactions. If a user does not anonymize his or her IP address, an interested party can identify the individual s physical location. Additionally, [..] researchers [..] demonstrated the inherent limits of anonymity when using Bitcoin \Box by conducting passive analysis of various types of public Bitcoin information, such as transaction records and user postings of public-private keys. The researchers suggest that **law** enforcement agencies or other centralized services (such as exchangers or retailers) who have access to less public information (bank account information or shipping addresses) can connect even more real world identifiers to Bitcoin wallets and transaction histories."

FBI Directorate of Intelligence Cyber Intelligence Section and Criminal Intelligence Section (2012)

ZeroCoin



Figure 1: Two example block chains. Chain (a) illustrates a normal Bitcoin transaction history, with each transaction linked to a preceding transaction. Chain (b) illustrates a Zerocoin chain. The linkage between mint and spend (dotted line) cannot be determined from the block chain data.

How has Bitcoin faired.

- 2008: Invented by Satoshi Nakamoto.
- 2009: Implemented by Nakamoto + others.
- 2011: 1 Bitcoin > 1 US dollar.
- 2012: Bitpay reports over 1000 online merchants using Bitcoins
- 2013: "we believe bitcoin can become a major means of payment for ecommerce and may emerge as a serious competitor to traditional moneytransfer providers."
 - Bank of America Merrill Lynch
- 2013: China forbids banks from dealing in Bitcoin + Biadu stops accepting btc
- 2014: IRS issues tax guidance on Bitcoins.
- Today: 1 Bitcoin > ~350 US dollars, major retailers support it including: expedia, dell, overstock.com, newegg.

How has Bitcoin faired.

Market Price (USD)



Jan 'Ó9 May '09 Sep '09 Jan '10 May '10 Sep '10 Jan '11 May '11 Sep '11 Jan '12 May '12 Sep '12 Jan '13 May '13 Sep '13 Jan '14 May '14 Sep '14

Bitcoin not a Currency but a Protocol.

- Bitcoin has a built-in scripting language.
 If A happens then do B.
- <u>http://www.proofofexistence.com/</u>
- http://coloredcoins.org/
- https://www.namecoin.org/
- <u>https://www.ethereum.org/</u> Ethereum: Freenet or Skynet? April 15, 2014 at 12:30pm



Ages/âge/edades

18323

The Bitcoin Blockchain

285,800 pcs/pzs

Building Toy Jouet de Construction Jughuete para Costruir



Includes Winklevil & Bitcoin Miner mini-figurines

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