

**Table 2** Average transaction fees, transaction time, transaction capacity and energy efficiency of the ten biggest crypto-currencies

Cryptocurrency	Average transaction fee in US\$	Average transaction time	Transaction capacity per second	Energy efficiency	Additional features
1. Bitcoin	7.32	9-10 minutes	7	Low (PoW blockchain)	
2. Ethereum	0.22	14 seconds	20	Low (PoW blockchain)	Supports smart contracts
3. Bitcoin Cash	0.32	9-10 minutes	50	Low (PoW blockchain)	
4. Ripple	0.0000024 (+ IOU fee)	3.5 seconds	1,000	High (Voting-style algorithm)	Enables IOU transactions in any currency
5. Litecoin	0.15	2 minutes	56	Low (PoW blockchain)	
6. Dash	0.30	2-3 minutes	(4,000)	Low (PoW blockchain)	
7. NEO	None (+ variable fee)	A few seconds	1,000	High (Pol blockchain)	Supports smart contracts
8. IOTA	None	No data available	500-800	Rather high (PoW Tangle)	Especially suited for IOT devices
9. Monero	2.43	2 minutes	1,700	Low (PoW blockchain)	Advanced privacy features
10. NEM	0.21	30 seconds	(3,000)	High (Pol blockchain)	Integrated reputation system

*Note:* This table is based on data from 20 November 2017. It represents a snapshot and may be subject to significant changes within short time spans. Furthermore, the accuracy of the data on transaction times and capacities varies and is in some instances only based on estimates. It should, however, give the reader a feeling for the rough dimensions of the speeds and capacities of the listed crypto currencies. [PoW = Proof of Work; Pol = Proof of Importance.]

*Source:* Ohnesorge (2018).

### **(iii) Security: how secure and for how long?**

Although blockchains are highly resilient compared to traditional databases due to their decentralized and distributed nature and the use of cryptographic techniques, they are not completely immune from traditional security challenges. The fact that data are distributed among participating nodes makes disaster recovery much easier: should a node be compromised, blockchain data can be recovered from