

# Is Bitcoin Stable, Secure, and Scalable?

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**Abstract:** I will first give a short introduction to the Bitcoin system, explaining some of the basics such as transactions and the block chain. Then, I will discuss some interesting technical aspects in more detail, regarding the stability, security, and scalability of Bitcoin. Regarding stability, I will discuss Bitcoin's eventual consistency, and the related problem of double spending. Regarding security, I will shed some light into our findings regarding the bankruptcy of MtGox, previously the dominant Bitcoin exchange service. Finally, I will discuss scalability. I will present duplex micropayment channels, a technique introduced in the companion paper with Christian Decker. Apart from scalability, these channels also guarantee end-to-end security and instant transfers, laying the foundation of a network of payment service providers.