

[Home](#) > [Cryptofinance and Mechanisms of Exchange](#) > Chapter

Cryptocurrencies as an Asset Class

| Chapter | First Online: 03 January 2020

| pp 1–28 | [Cite this chapter](#)



Cryptofinance and Mechanisms of Exchange

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **privacy policy** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

- > **Store and/or access information on a device**
- > **Personalised advertising and content, advertising and content measurement, audience research and services development**

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)



This is a preview of subscription content, [log in via an institution](#)  to check access.

Access this chapter

[Log in via an institution](#) →

Subscribe and save

Springer+ Basic

€32.70 /Month

- Get 10 units per month
- Download Article/Chapter or eBook
- 1 Unit = 1 Article or 1 Chapter
- Cancel anytime

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 [partners](#), also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our [privacy policy](#) for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

Buy Softcover Book →

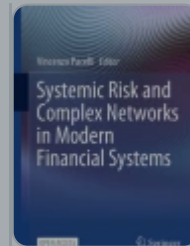
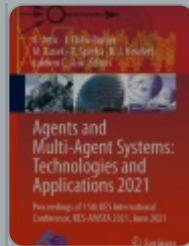
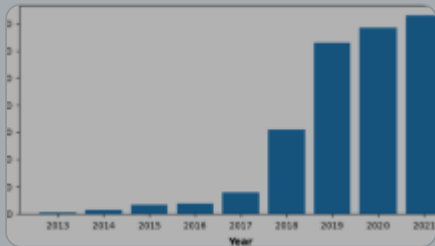
Buy Hardcover Book →

Tax calculation will be finalised at checkout

Purchases are for personal use only

[Institutional subscriptions](#) →

Similar content being viewed by others



Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **privacy policy** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

Regulatory Authority, Inc.; International Securities Exchange LLC; The NASDAQ Stock Market LLC; New York Stock Exchange LLC; NYSE Amex LLC; NYSE Arca, Inc.; National Stock Exchange, Inc. and NASDAQ OMX PHLX LLC.

4. We also performed a check on Minimum-Variance optimization. Due to the high volatility levels of cryptocurrencies, we did not find any significant volatility reduction.

References

Ackert LF (2012) The impact of circuit breakers on market outcomes. Technical report. Economic Impact Assessment EIA9. UK Government Office for Science – Foresight Project

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 [partners](#), also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our [privacy policy](#) for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

Buterin V (2013a) A next-generation smart contract and decentralized application platform. Technical report. Ethereum project white paper.

<https://github.com/ethereum/wiki/blob/master/drafts/%5Benglish%5D-old-ethereumwhitepaper.md>

Buterin V (2013b) Bitcoin network shaken by blockchain fork.

[bitcoinmagazine.com](https://bitcoinmagazine.com/articles/bitcoin-network-shaken-by-blockchainfork-1363144448/). <https://bitcoinmagazine.com/articles/bitcoin-network-shaken-by-blockchainfork-1363144448/>

Buterin V (2016) "Ethereum 2.0". Ethereum project mauve paper.

<https://cdn.hackaday.io/files/10879465447136/Mauve%20Paper%20Vitalik.pdf>

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **privacy policy** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

loss. [bloomberg.com](https://www.bloomberg.com/news/articles/2014-02-28/mt-go-exchange-files-for-bankruptcy). <https://www.bloomberg.com/news/articles/2014-02-28/mt-go-exchange-files-for-bankruptcy>

Dwork C, Naor M (1992) Pricing via processing or combatting junk mail. In: Annual international cryptology conference. Springer, Heidelberg, pp 139–147. https://link.springer.com/chapter/10.1007/3-540-48071-4_10

[Google Scholar](#)

Dyhrberg AH, Foley S, Svec J (2018) How investible is Bitcoin? Analyzing the liquidity and transaction costs of Bitcoin markets. Econ Lett 171:140–143

[Article](#) [Google Scholar](#)

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **privacy policy** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

<http://golemproject.net/doc/DraftGolemProjectWhitepaper.pdf>

Higgins S (2014) Hal Finney on Bitcoin: in his own words. coindesk.com.

<https://www.coindesk.com/hal-finney-bitcoin-words/>

Jakobsson M, Juels A (1999) Proofs of work and bread pudding protocols. In: Secure information networks. Springer, Berlin, pp 258–272.

https://link.springer.com/content/pdf/10.1007/978-0-387-35568-9_18.pdf

[Chapter](#) [Google Scholar](#)

Johnston D et al (2015) The general theory of decentralized applications, DApps.

GitHub 9. [https://github.com/TarantulaTechnology/Documents-](https://github.com/TarantulaTechnology/Documents-Blockchain/blob/master/The%20General%20Theory%20of%20Decentralized%20A)

[Blockchain/blob/master/The%20General%20Theory%20of%20Decentralized%20A](https://github.com/TarantulaTechnology/Documents-Blockchain/blob/master/The%20General%20Theory%20of%20Decentralized%20A)

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **privacy policy** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

https://www.researchgate.net/profile/Ralph_Merkle/publication/220713913_Protocols_for_Public_Key_Cryptosystem/links/00b495384ecda07784000000/Protocols-for-Public-Key-Cryptosystems.pdf

Merkle RC (1990) A certified digital signature in Conference on the theory and application of cryptology. In: Brassard G (ed) Advances in cryptology. CRYPTO'89 LNCS 435. Springer, Heidelberg, pp 218–238.

https://link.springer.com/content/pdf/10.1007/0-387-34805-0_21.pdf

[Google Scholar](#)

Nakamoto S (2008) Bitcoin: a peer-to-peer electronic cash system. Technical report. <https://bitcoin.org/bitcoin.pdf>

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **privacy policy** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

Swissinfo (2016) Zug first to accept Bitcoin for government services. swissinfo.ch. https://www.swissinfo.ch/eng/business/crypto-valley_zug-firstto-accept-bitcoin-for-government-services/42143908

Szabo N (2008) Bit gold. <http://unenumerated.blogspot.de/2005/12/bitgold.html>

Trimborn S, Li M, Härdle WK (2018) Investing with cryptocurrencies - A liquidity constrained investment approach

[Google Scholar](#)

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **privacy policy** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

Acknowledgements

We thank Christian Gombert of the Hauck & Aufhäuser Privatbankiers as well as Johannes Bernius for their invaluable support with data acquisition. Lars Geiger, the participants of the 6th Crowdfunding Symposium, and the participants of the 26th Annual Conference of the Multinational Finance Society have provided valuable feedback.

Author information

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 [partners](#), also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our [privacy policy](#) for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

Rights and permissions

[Reprints and permissions](#)

Copyright information

© 2019 Springer Nature Switzerland AG

About this chapter

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 [partners](#), also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our [privacy policy](#) for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

Search

Search by keyword or author



Navigation

Find a journal

Publish with us

Track your research

Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 96 [partners](#), also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our [privacy policy](#) for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

Store and/or access information on a device

Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)