

Bitcoin and other cryptocurrencies

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1 Introduction

Cryptocurrencies – from the perspective of an investor

- What is it?
- Investment properties – returns, covariance
- Practicalities

2 Intro

We now discuss Bitcoin (₿), a relatively recent innovation to the world's financial markets.

Bitcoin has aspirations to become money/currency.

A currency has three basic functions

- Transactions
- Store of value
- Unit of account

Which of these are facilitated by Bitcoin?

Bitcoin – Issues to be discussed

- How does it work?
 - Cryptographic basis
 - Need for a public basis – infrastructure of computing
 - What does it take to become money?
- What is it used for?
 - Transactions

- Store of value / Investment asset
- Issues
 - Risk of failure (technical)
 - Systemic risk
 - Regulatory risk

3 The largest crypto assets (by value)

Table 1 The largest crypto assets

Panel A: October 2021

#	Name	Price	Market Cap (billion)
1	Bitcoin (BTC)	\$48,116.04	\$903
2	Ethereum(ETH)	\$3,291.19	\$386
3	Cardano(ADA)	\$2.25	\$71
4	Binance Coin (BNB)	\$420.51	\$70
5	Tether (USDT)	\$1.00	\$68
6	Solana (SOL)	\$161.31	\$48
7	XRP (XRP)	\$1.03	\$48
8	USD Coin (USDC)	\$0.9997	\$31
9	Polkadot (DOT)	\$31.96	\$31
10	Dogecoin (DOGE)	\$0.2178	\$28
11	Uniswap (UNI)	\$25.26	\$15
12	Terra (LUNA)	\$38.03	\$15
13	Avalanche AVAX	\$68.16	\$14
14	Binance USD (BUSD)	\$0.9998	\$13
15	Chainlink(LINK)	\$26.39	\$11

Panel B: Feb 2023

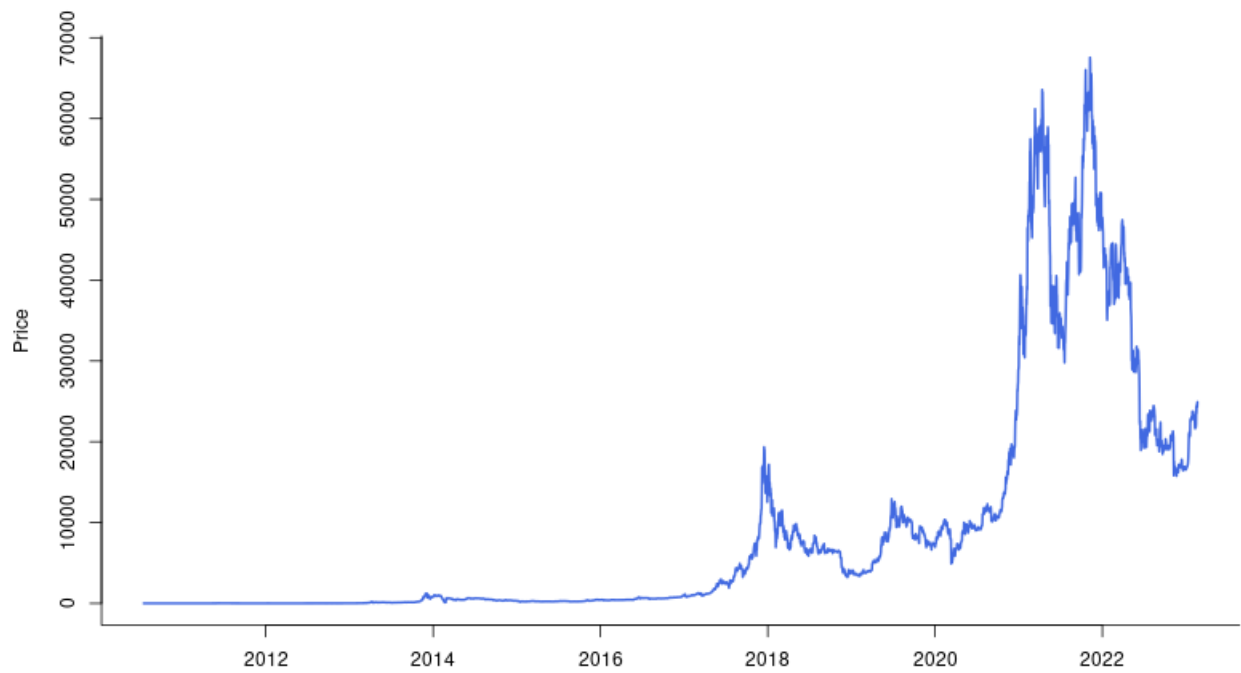
	Name	Price	Market Cap (billion)	Volume(24h) (billion)
1	Bitcoin (BTC)	\$23,841.38	\$459	\$34
2	Ethereum (ETH)	\$1,678.41	\$205	\$11
3	Tether (USDT)	\$1.00	\$67	\$47
4	BNB	\$328.35	\$51	\$0.98
5	USD Coin (USDC)	\$0.9998	\$42	\$4
6	XRP	\$0.4137	\$21	\$1
7	Binance USD (BUSD)	\$1.00	\$16	\$12
8	Cardano (ADA)	\$0.4073	\$14	\$0.63
9	Dogecoin (DOGE)	\$0.09292	\$12	\$0.9
10	Polygon (MATIC)	\$1.23	\$10	\$0.96
11	Solana (SOL)	\$25.21	\$9	\$1.2
12	Polkadot (DOT)	\$6.73	\$7	\$0.4
13	Litecoin (LTC)	\$100.30	\$7	\$0.9
14	Shiba Inu (SHIB)	\$0.00001253	\$6	\$0.5
15	Avalanche (AVAX)	\$22.04	\$6	\$1

The 15 largest crypto coins in october 2021 and february 2023. source: coinmarketcap.org

The time series of the largest five.

Figure 1 Time series of crypt prices

Panel A: Bitcoin (BTC)



Panel B: Ether (ETH)

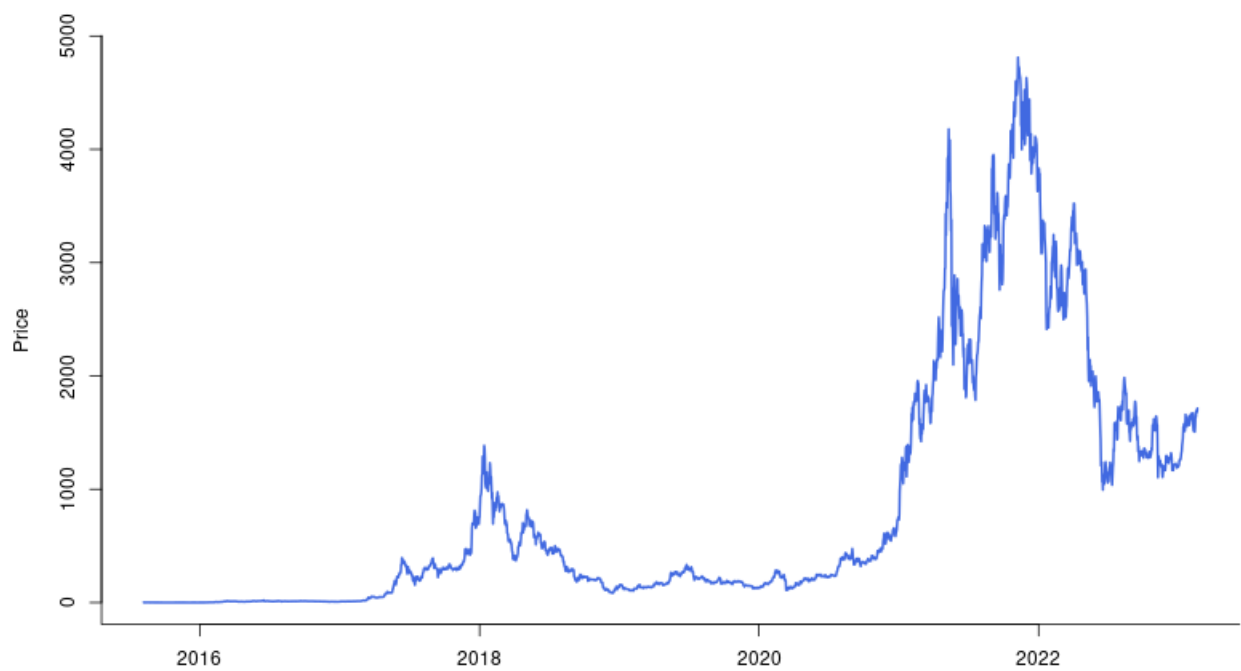
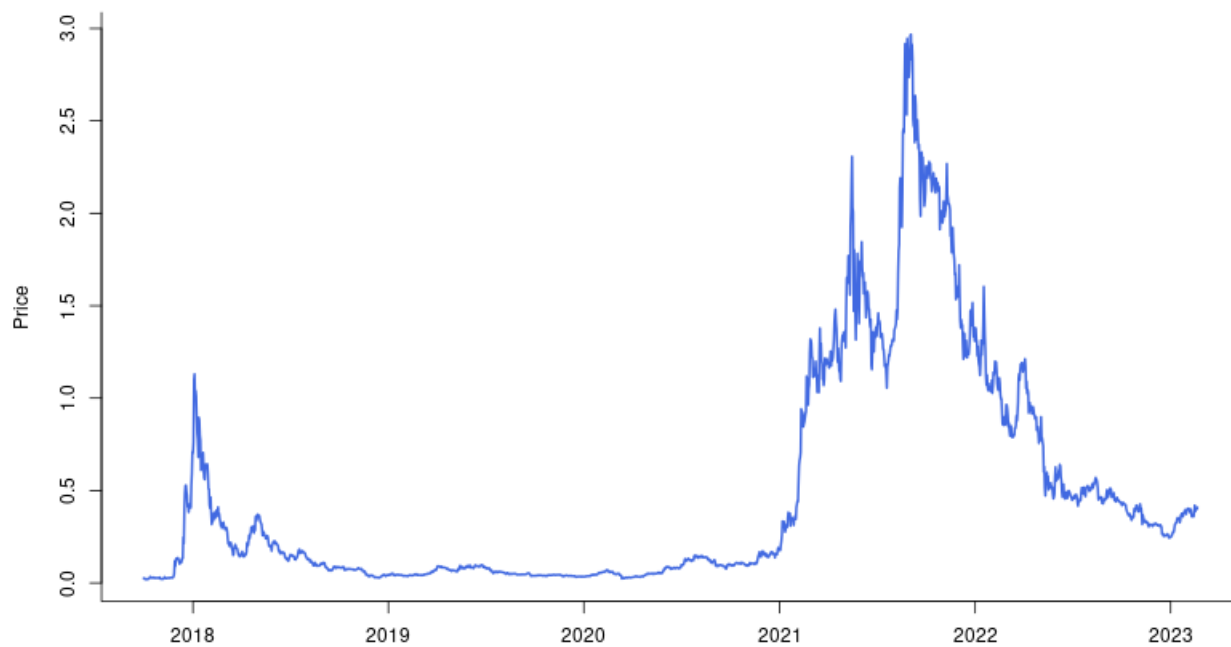


Figure 1 (continued)

Panel A: Cardano (ADA)



Panel B: Binance coin (BNB)

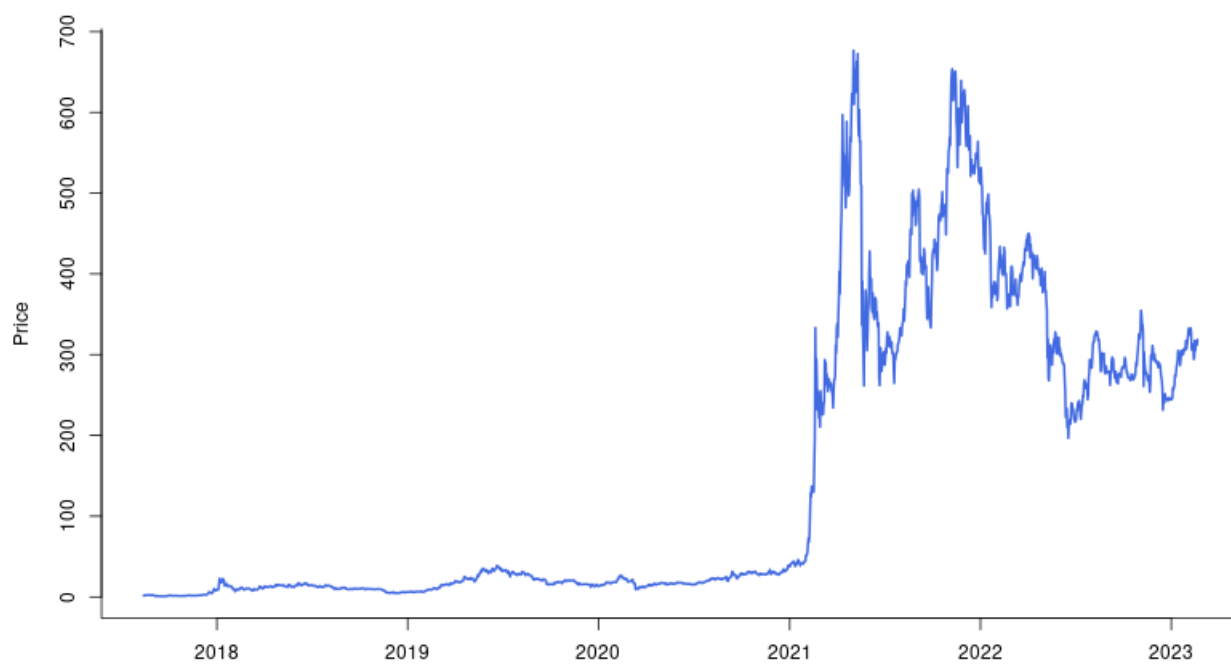
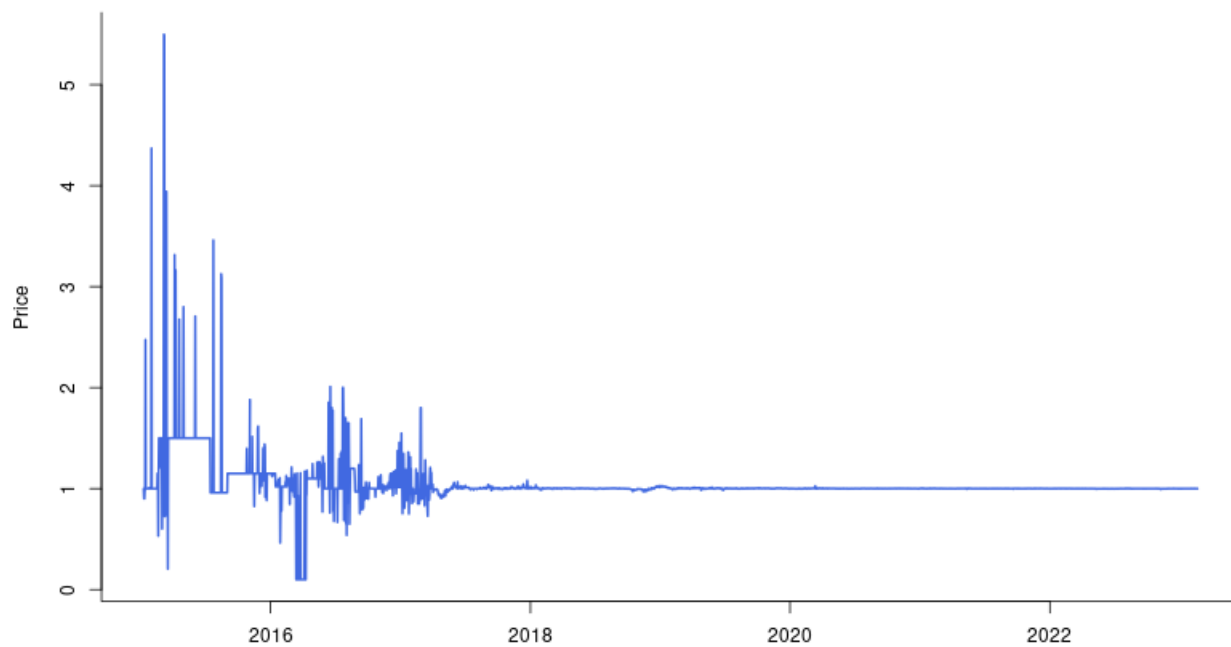
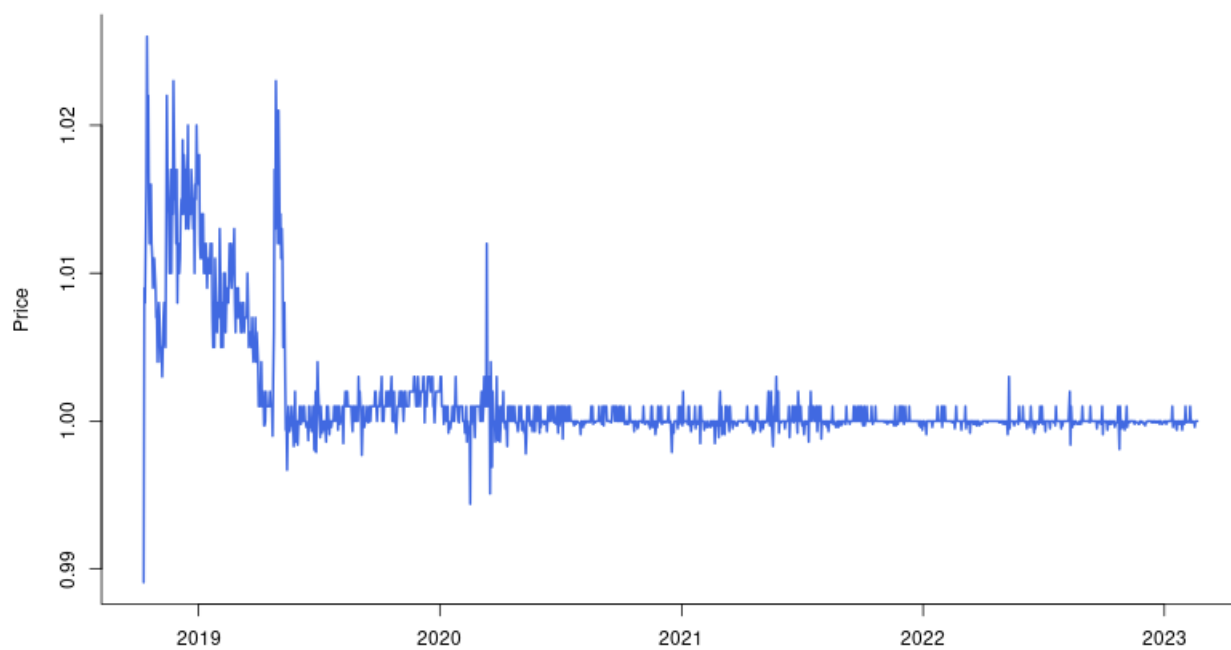


Figure 1 (continued)

Panel B: Tether (USDT)



Panel C: USD coin (USDC)



4 Summarizing – cryptocurrencies

Cryptocurrencies – from the perspective of an investor

- What is it?
- Investment properties – returns, covariance
- Practicalities

5 Literature

? (intro to Bitcoin)