



*Scarcity in the Digital Realm*

July 14

2021



2021 Q2

# Digital Gold Institute: Vision

R&D center of excellence focused on teaching, training, consulting, and advising about scarcity in digital domain (bitcoin and crypto-assets) and the underlying blockchain technology



## **Bitcoin: Digital Gold**

The most successful attempt at creating *scarcity in the digital realm* without a trusted third party. *Bitcoin is the digital equivalent of gold, disruptive for our current digital civilization and the future of money and finance.* More a crypto-commodity than a crypto-currency, Bitcoin aims to be world reserve asset.



## **Blockchain: Hype or Reality?**

Blockchain requires an intrinsic native digital asset to provide the economic incentives for the blockchain maintainers to be honest. Without the seigniorage revenues associated to its native asset, a blockchain system would need to select and appoint its maintainers, ultimately resorting to central governance.



## **Beyond Bitcoin: Timestamping**

A timestamp demonstrates that a document existed in a specific status prior to a given point in time. Digital data can be securely timestamped through the attestation of its hash value in a blockchain transaction. *What jewellery is for gold, timestamping could be for bitcoin: not essential but effective at leveraging its beauty.*



## **Financial Services for Crypto**

The most promising field, instead of technological applications of blockchain, is the development of financial services for crypto assets: those tools, practices, and facilities needed by institutional investors and high-net-worth individuals. *Finance might not need blockchain, but the blockchain economy needs new financial services.*

# Digital Gold Institute: Activities

R&D center of excellence focused on teaching, training, consulting, and advising about scarcity in digital domain (bitcoin and crypto-assets) and the underlying blockchain technology



## Consulting

Becoming one of our [partners](#) means empowering your business with a proper understanding of Bitcoin, crypto assets, and blockchain technology. It is a strategic choice that will allow you to leverage unique opportunities while avoiding the irrational hype that pollutes these topics.



## Training

We offer training and education about Bitcoin, crypto assets, blockchain, distributed ledger, smart contracts, and cryptography: the program is based on the [Bitcoin and Blockchain Technology](#) course taught at Milano-Bicocca and other universities.



## Research

Our research activity includes quarterly [reports](#) on the bitcoin and blockchain ecosystem and the thesis works of our [students](#). Anyway, the bulk of the activity is happening at the [Crypto Asset Lab](#) (CAL), a joint research initiative with the University of Milano-Bicocca.



## Development

We [write code](#) and love to get our hands dirty in programming and technology. Check out our [OpenTimestamps calendar](#) free facility and [btclib](#), an open-source Python library intended for teaching/learning/using bitcoin, its blockchain, and the associated elliptic curve cryptography.



# Advisory and Training for Institutions, Consultancies, and Private Firms

Selected current and past collaborations



# Agenda

- 1. Market**
- 2. Ecosystem**
- 3. Regulation**
- 4. Technology**
- 5. The Institute**





MARKET





# Bitcoin Performance (2021 Q2)





# Bitcoin Performance

Price dynamic is the discovery process of value: volatility is physiologic when it comes to assess the fair value of something so controversial as the digital equivalent of gold



| Date        | Price        | Yearly Performance |
|-------------|--------------|--------------------|
| 31-Dec-2011 | 5.00 \$      | 1,566.67 %         |
| 31-Dec-2012 | 13.59 \$     | 171.80 %           |
| 31-Dec-2013 | 754.01 \$    | 5,448.27 %         |
| 31-Dec-2014 | 320.19 \$    | -58.49 %           |
| 31-Dec-2015 | 430.57 \$    | 37.02 %            |
| 31-Dec-2016 | 963.74 \$    | 121.89 %           |
| 31-Dec-2017 | 14,156.40 \$ | 1,318.01 %         |
| 31-Dec-2018 | 3,742.70 \$  | -72.60 %           |
| 31-Dec-2019 | 7,193.60 \$  | 87.16 %            |
| 31-Dec-2020 | 28,968.31 \$ | 302.33 %           |
| 30-Jun-2021 | 35,086.59 \$ | 19.40 %            |



# Worst Bitcoin Drawdowns

| All Time High Date | All Time High Value | Drawdown Date | Drawdown Value | Drawdown Percentage |
|--------------------|---------------------|---------------|----------------|---------------------|
| 10-Jun-2011        | \$35.00             | 21-Nov-2011   | \$2.29         | -93%                |
| 04-Dec-2013        | \$1,151.00          | 14-Jan-2015   | \$178.10       | -85%                |
| 16-Dec-2017        | \$19,497.40         | 15-Dec-2018   | \$3,236.76     | -83%                |
| 13-Apr-2021        | \$63,445.64         | 25-Jun-2021   | \$31,604.13    | -50%                |

## Worst Daily Bitcoin Loss

| Date        | Return  |
|-------------|---------|
| 12-Apr-2013 | -61.37% |
| 12-Mar-2020 | -37.17% |
| 12-Jun-2011 | -28.60% |
| 18-Oct-2011 | -25.66% |
| 02-May-2013 | -24.52% |

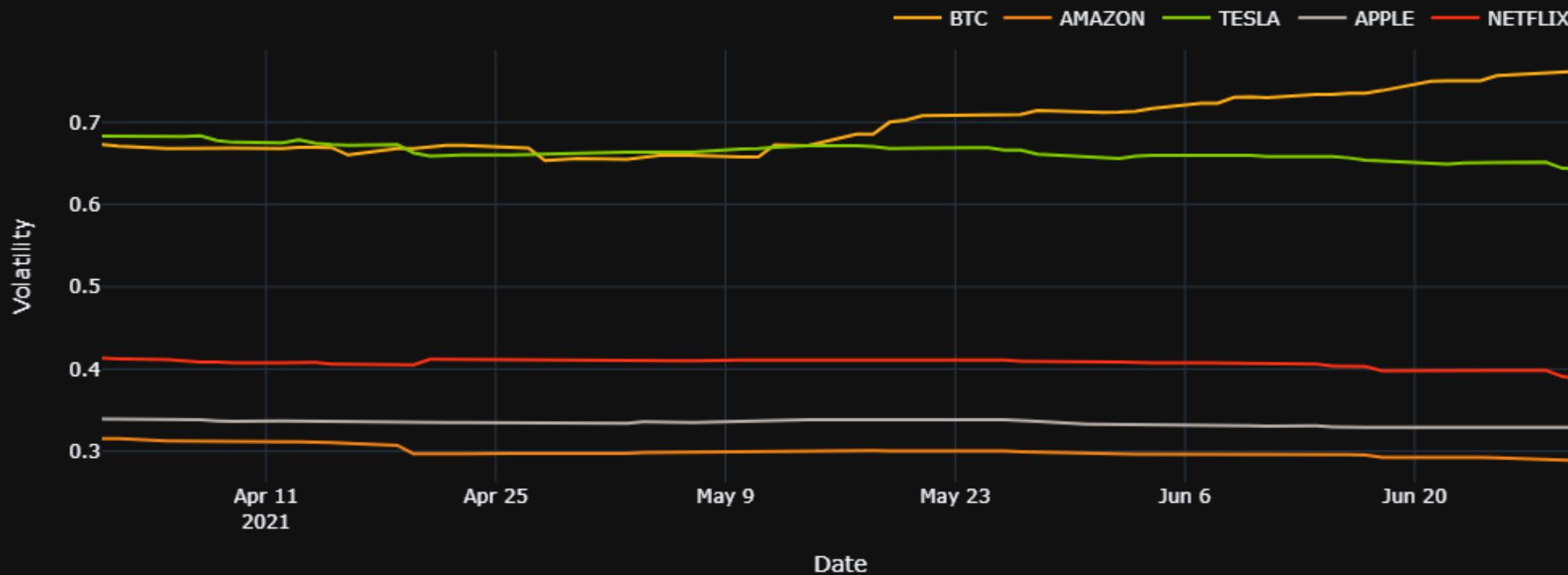
## 2021 Worst Daily Bitcoin Loss

| Date        | Return  |
|-------------|---------|
| 19-May-2021 | -14.18% |
| 21-Jan-2021 | -13.13% |
| 12-May-2021 | -12.78% |
| 21-Jun-2021 | -11.21% |
| 23-Feb-2021 | -9.60%  |



# Volatility of (Last Decade) Best Performing Assets

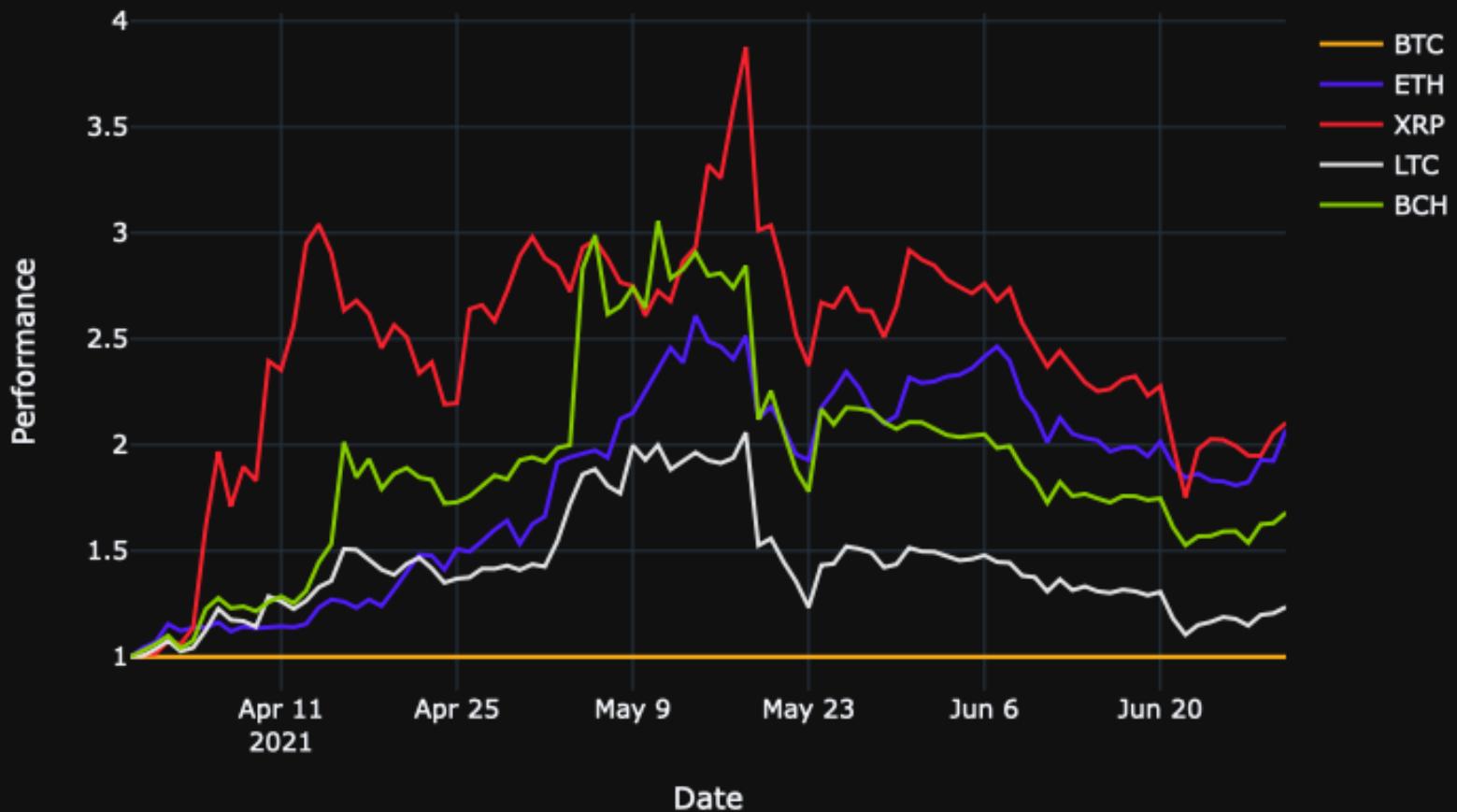
252 Days Rolling Volatility





# Altcoins vs Bitcoin (2021 Q2)

Crypto-Assets: BTC denominated performances



| Altcoin | Quarterly Performance |
|---------|-----------------------|
| ETH     | 107.21%               |
| XRP     | 110.39%               |
| LTC     | 23.51%                |
| BCH     | 68.00%                |



# Altcoins vs Bitcoin (1Y)

Crypto-Assets: BTC denominated performances



| Altcoin | Quarterly Performance |
|---------|-----------------------|
| ETH     | 162.89%               |
| XRP     | 5.08%                 |
| LTC     | -8.71%                |
| BCH     | -38.18%               |



# Altcoins vs Bitcoin (3Y)

Crypto-Assets: BTC denominated performances



| Altcoin | Quarterly Performance |
|---------|-----------------------|
| ETH     | -8.56%                |
| XRP     | -72.54%               |
| LTC     | -67.55%               |
| BCH     | -87.17%               |

# DGI Crypto Index Weights (Q2 2021)

- **Weighted by trading volume,**  
Bitcoin accounts for about the  
70.3% of the index composition
- Exchanges considered:



POLONIEX

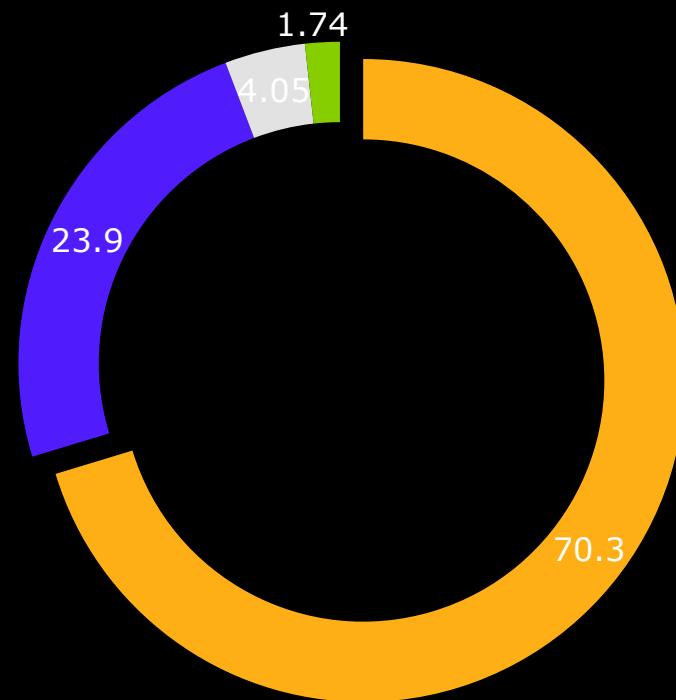


coinbase | Pro



Bitstamp

Index weight



■ Bitcoin ■ Ether ■ Litecoin ■ Bitcoin Cash



# DGI Crypto Index

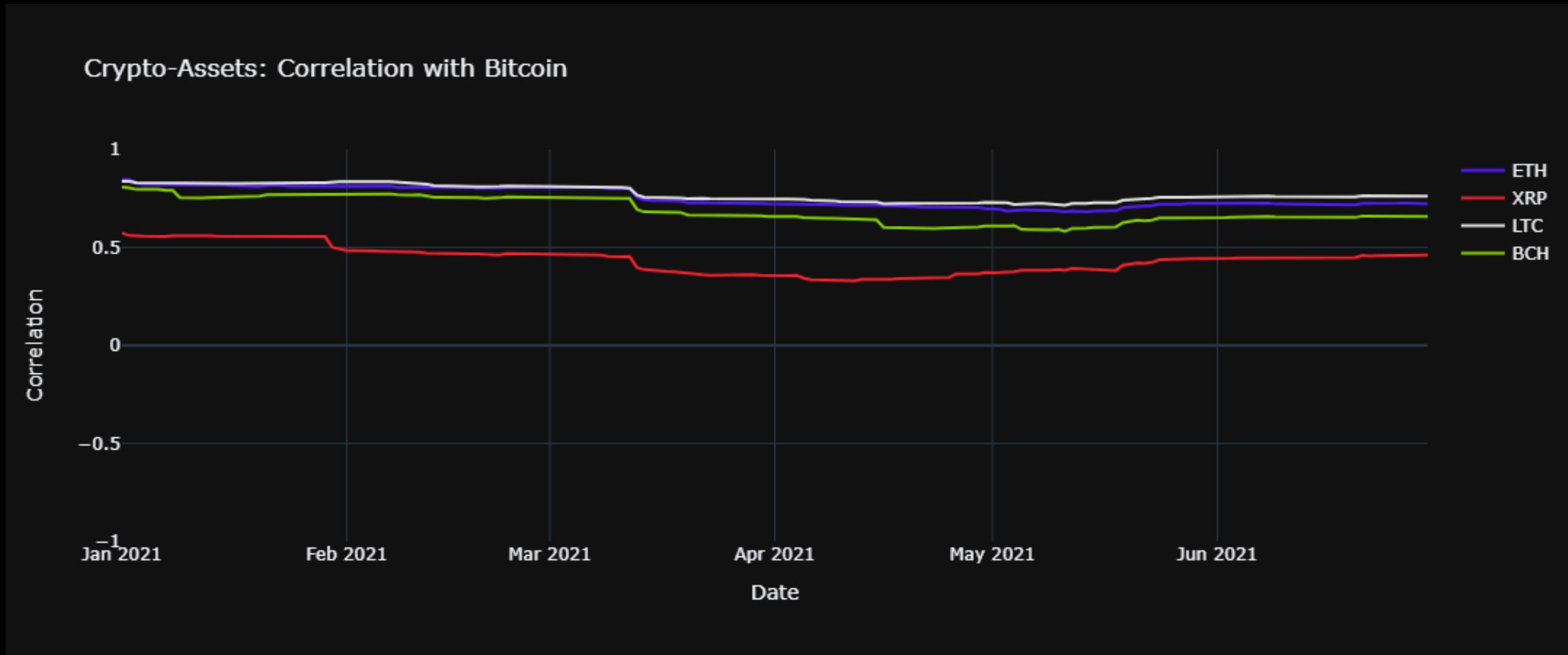


Developed with





# Correlation With Bitcoin: 1Y Rolling Window



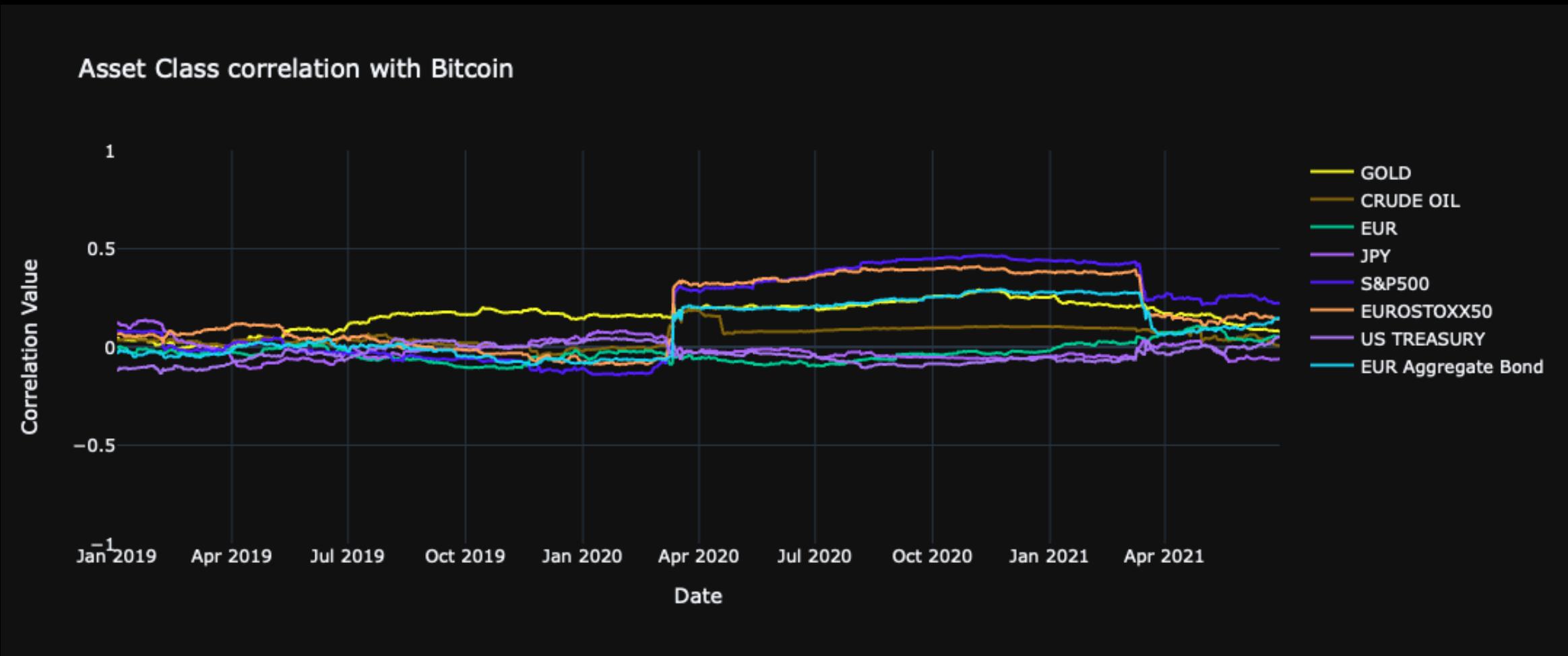


# Correlation Matrix: 1Y

|                    |                        |            |            |            |                  |               |                  |             |                 |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
|--------------------|------------------------|------------|------------|------------|------------------|---------------|------------------|-------------|-----------------|------------|------------|---------------|-------------------|------------------|-------------------|--------------------|----------------|--|--|--|--|
| <b>BTC</b>         | 100.00%                |            |            |            |                  |               |                  |             |                 |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>ETH</b>         | 70.68%                 | 100.00%    |            |            |                  |               |                  |             |                 |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>LTC</b>         | 79.34%                 | 76.70%     | 100.00%    |            |                  |               |                  |             |                 |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>XRP</b>         | 37.59%                 | 43.69%     | 49.90%     | 100.00%    |                  |               |                  |             |                 |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>GOLD</b>        | 7.86%                  | 10.35%     | 11.12%     | -2.77%     | 100.00%          |               |                  |             |                 |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>COPPER</b>      | 18.84%                 | 15.62%     | 19.18%     | 11.94%     | 24.00%           | 100.00%       |                  |             |                 |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>CRUDE OIL</b>   | 0.52%                  | 0.66%      | -1.55%     | -0.11%     | -2.57%           | 14.40%        | 100.00%          |             |                 |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>CORN</b>        | 12.12%                 | 7.65%      | 5.82%      | 0.44%      | 8.97%            | 19.42%        | 12.42%           | 100.00%     |                 |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>EUR</b>         | 6.23%                  | 2.89%      | 6.14%      | 0.62%      | 12.02%           | 6.19%         | -5.88%           | 0.91%       | 100.00%         |            |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>GBP</b>         | 4.71%                  | 3.57%      | 8.77%      | 8.10%      | 1.08%            | 4.19%         | 3.52%            | -3.54%      | 60.11%          | 100.00%    |            |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>JPY</b>         | -4.91%                 | -5.39%     | -3.10%     | -8.72%     | 3.94%            | 7.37%         | -5.19%           | -6.18%      | 52.73%          | 39.65%     | 100.00%    |               |                   |                  |                   |                    |                |  |  |  |  |
| <b>NASDAQ</b>      | 26.13%                 | 16.43%     | 18.98%     | 18.85%     | 21.49%           | 14.93%        | 16.03%           | 2.78%       | -4.67%          | -3.75%     | -5.56%     | 100.00%       |                   |                  |                   |                    |                |  |  |  |  |
| <b>S&amp;P500</b>  | 22.47%                 | 14.06%     | 14.87%     | 16.95%     | 17.08%           | 21.26%        | 27.93%           | 1.87%       | -6.20%          | -5.81%     | -8.59%     | 88.84%        | 100.00%           |                  |                   |                    |                |  |  |  |  |
| <b>EUROSTOXX50</b> | 14.80%                 | 11.56%     | 7.54%      | 3.92%      | -5.41%           | 14.19%        | 34.85%           | -4.34%      | -7.87%          | -1.53%     | -8.25%     | 28.26%        | 47.57%            | 100.00%          |                   |                    |                |  |  |  |  |
| <b>VIX</b>         | -23.52%                | -14.27%    | -17.85%    | -15.82%    | -12.04%          | -18.33%       | -15.51%          | -2.64%      | 9.20%           | 13.92%     | 10.40%     | -64.76%       | -72.79%           | -34.61%          | 100.00%           |                    |                |  |  |  |  |
| <b>US TREASURY</b> | 4.28%                  | 8.25%      | 8.30%      | 2.72%      | 16.88%           | -17.35%       | -13.64%          | -8.58%      | -2.71%          | -4.79%     | 0.43%      | 14.41%        | -4.18%            | -22.88%          | -1.37%            | 100.00%            |                |  |  |  |  |
| <b>PAN EUR</b>     | 13.86%                 | 12.51%     | 7.97%      | 0.80%      | 16.35%           | -6.61%        | -13.50%          | -4.37%      | 0.72%           | -7.56%     | 5.98%      | 19.75%        | 9.68%             | -9.06%           | -9.48%            | 53.71%             | 100.00%        |  |  |  |  |
|                    | <b>BTC</b>             | <b>ETH</b> | <b>LTC</b> | <b>XRP</b> | <b>GOLD</b>      | <b>COPPER</b> | <b>CRUDE OIL</b> | <b>CORN</b> | <b>EUR</b>      | <b>GBP</b> | <b>JPY</b> | <b>NASDAQ</b> | <b>S&amp;P500</b> | <b>UROSTOXX5</b> | <b>VIX</b>        | <b>US TREASURY</b> | <b>PAN EUR</b> |  |  |  |  |
|                    | <b>Crypto-currency</b> |            |            |            | <b>Commodity</b> |               |                  |             | <b>Currency</b> |            |            | <b>Equity</b> |                   |                  | <b>Volatility</b> | <b>Bond</b>        |                |  |  |  |  |



# Correlation With Bitcoin: 1Y Rolling Window



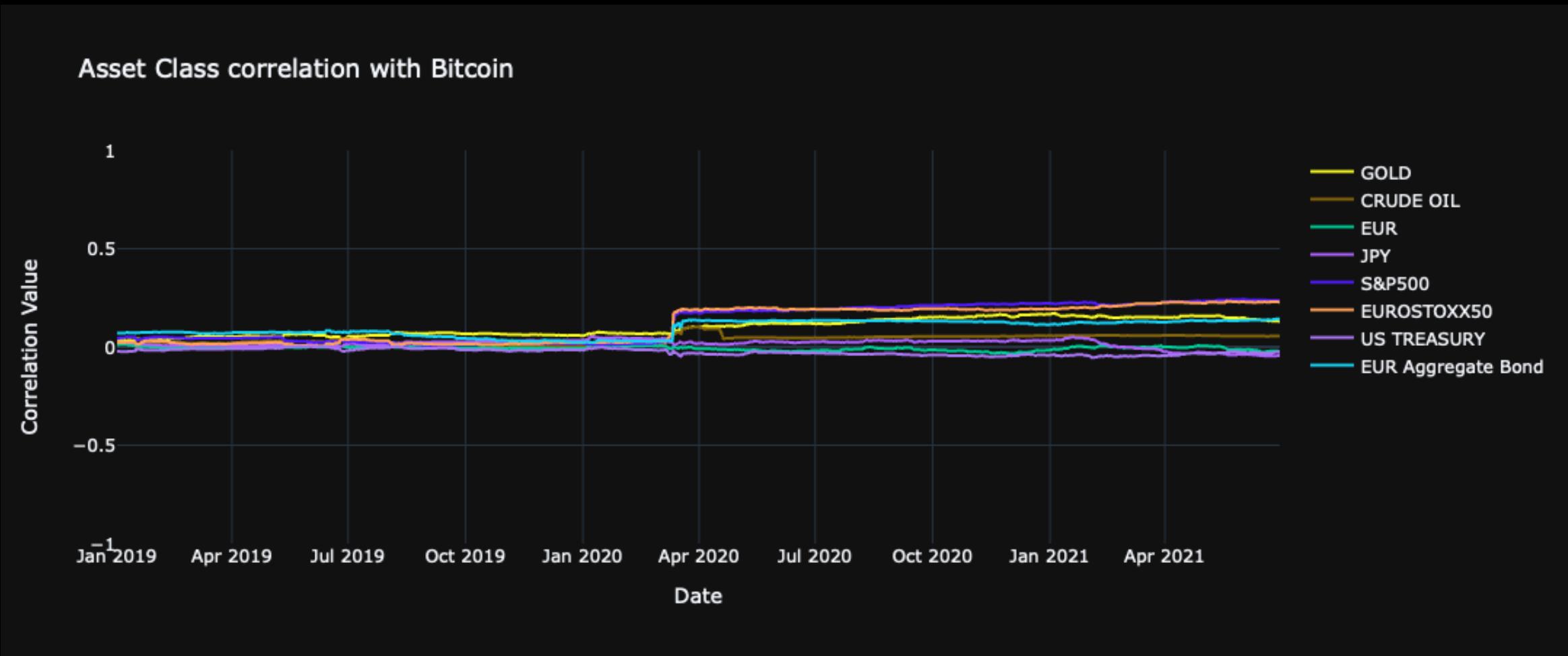


# Correlation Matrix: 3Y

|             | BTC             | ETH     | LTC     | XRP     | GOLD      | COPPER  | CRUDE OIL | CORN    | EUR      | GBP     | JPY     | NASDAQ  | S&P500  | EUROSTOXX50 | VIX        | US TREASURY | PAN EUR |           |
|-------------|-----------------|---------|---------|---------|-----------|---------|-----------|---------|----------|---------|---------|---------|---------|-------------|------------|-------------|---------|-----------|
| BTC         | 100.00%         |         |         |         |           |         |           |         |          |         |         |         |         |             |            |             |         | Corr = 1  |
| ETH         | 78.70%          | 100.00% |         |         |           |         |           |         |          |         |         |         |         |             |            |             |         | Corr = -1 |
| LTC         | 79.41%          | 81.68%  | 100.00% |         |           |         |           |         |          |         |         |         |         |             |            |             |         |           |
| XRP         | 50.42%          | 59.20%  | 59.66%  | 100.00% |           |         |           |         |          |         |         |         |         |             |            |             |         |           |
| GOLD        | 12.95%          | 9.68%   | 9.10%   | 1.37%   | 100.00%   |         |           |         |          |         |         |         |         |             |            |             |         |           |
| COPPER      | 11.72%          | 12.69%  | 12.86%  | 11.56%  | 14.28%    | 100.00% |           |         |          |         |         |         |         |             |            |             |         |           |
| CRUDE OIL   | 5.43%           | 3.38%   | 4.65%   | 3.04%   | 2.19%     | 11.24%  | 100.00%   |         |          |         |         |         |         |             |            |             |         |           |
| CORN        | 7.93%           | 7.47%   | 4.34%   | 4.10%   | 6.83%     | 13.68%  | 11.79%    | 100.00% |          |         |         |         |         |             |            |             |         |           |
| EUR         | -1.91%          | -1.10%  | -1.40%  | 1.29%   | 4.81%     | 5.51%   | -0.89%    | 0.44%   | 100.00%  |         |         |         |         |             |            |             |         |           |
| GBP         | -6.79%          | -4.35%  | -1.82%  | 1.13%   | -0.09%    | 0.86%   | -1.28%    | -1.32%  | 56.85%   | 100.00% |         |         |         |             |            |             |         |           |
| JPY         | -4.08%          | -5.15%  | -7.96%  | -6.95%  | 6.25%     | 2.39%   | -2.72%    | -1.60%  | 42.30%   | 25.11%  | 100.00% |         |         |             |            |             |         |           |
| NASDAQ      | 25.12%          | 24.12%  | 22.93%  | 19.76%  | 12.45%    | 27.53%  | 12.64%    | 8.43%   | 4.17%    | -3.35%  | 1.52%   | 100.00% |         |             |            |             |         |           |
| S&P500      | 23.80%          | 23.62%  | 21.63%  | 18.78%  | 10.55%    | 29.96%  | 14.86%    | 9.52%   | 6.07%    | -1.74%  | 1.89%   | 94.71%  | 100.00% |             |            |             |         |           |
| EUROSTOXX50 | 22.89%          | 23.51%  | 19.22%  | 14.80%  | 5.26%     | 32.27%  | 10.24%    | 8.78%   | -3.41%   | -2.03%  | -18.32% | 55.71%  | 64.55%  | 100.00%     |            |             |         |           |
| VIX         | -15.56%         | -16.19% | -16.11% | -15.45% | -0.39%    | -27.73% | -11.85%   | -8.31%  | 2.28%    | 2.46%   | 4.70%   | -72.10% | -70.89% | -48.15%     | 100.00%    |             |         |           |
| US TREASURY | -2.75%          | -3.58%  | -2.13%  | -3.86%  | 24.65%    | -17.70% | -7.76%    | -9.06%  | -2.51%   | -1.82%  | 5.16%   | -28.42% | -36.41% | -30.97%     | 25.29%     | 100.00%     |         |           |
| PAN EUR     | 13.91%          | 13.49%  | 12.46%  | 7.88%   | 24.78%    | 1.56%   | 5.54%     | 6.95%   | 4.44%    | -5.59%  | 3.80%   | 20.34%  | 19.02%  | 15.91%      | -8.95%     | 41.09%      | 100.00% |           |
|             | BTC             | ETH     | LTC     | XRP     | GOLD      | COPPER  | CRUDE OIL | CORN    | EUR      | GBP     | JPY     | NASDAQ  | S&P500  | EUROSTOXX50 | VIX        | US TREASURY | PAN EUR |           |
|             | Crypto-currency |         |         |         | Commodity |         |           |         | Currency |         |         | Equity  |         |             | Volatility |             | Bond    |           |

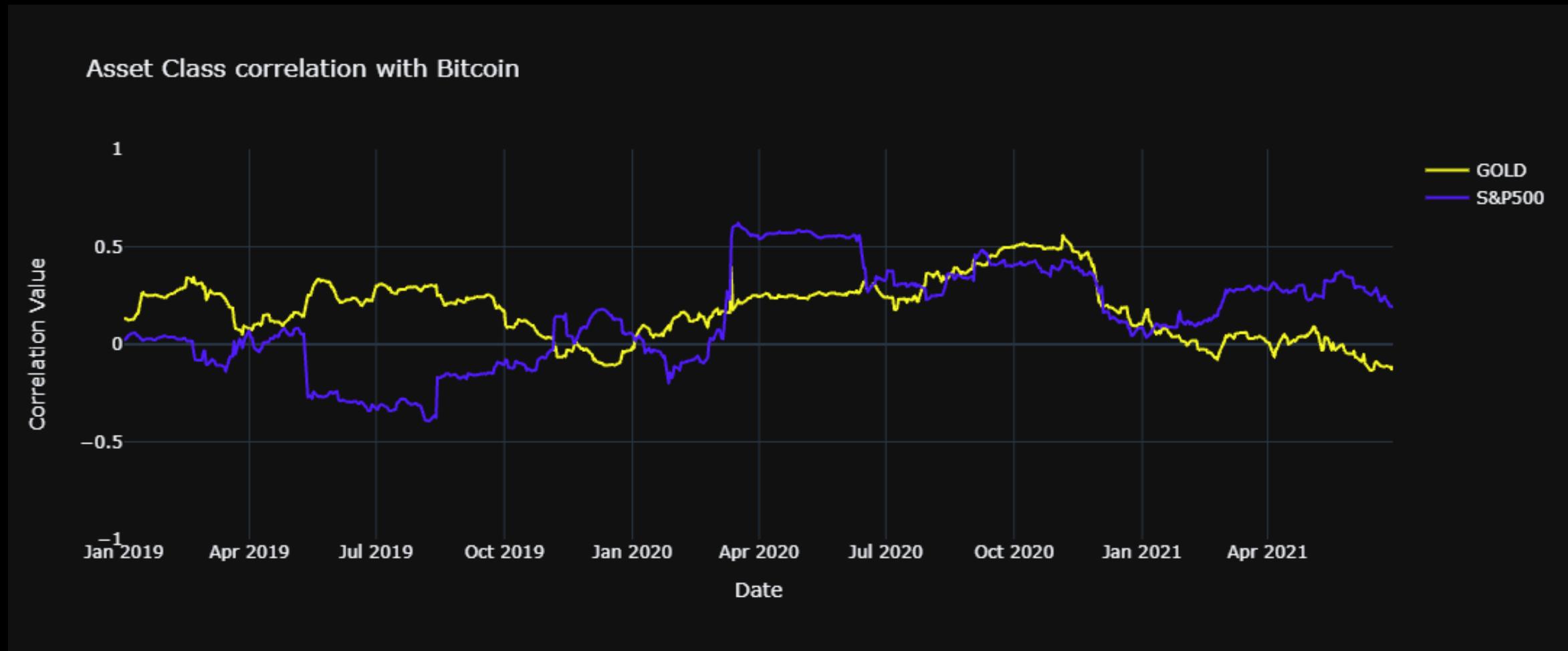


# Correlation With Bitcoin: 3Y Rolling Window



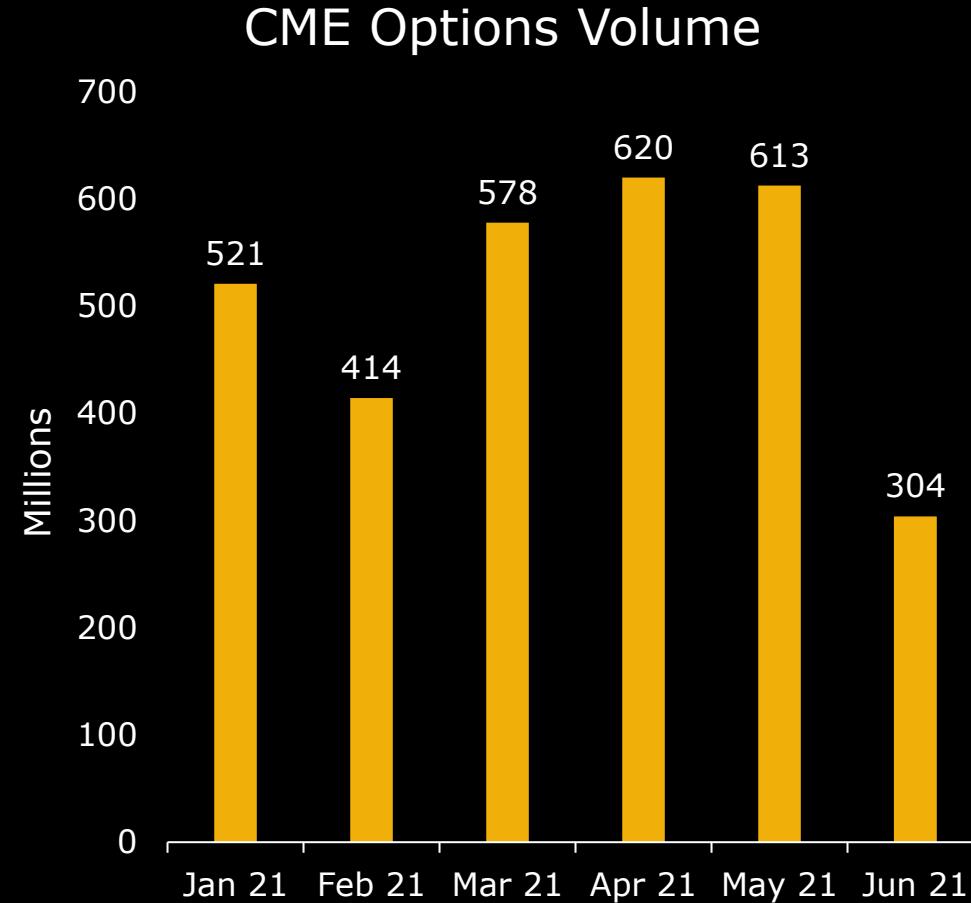
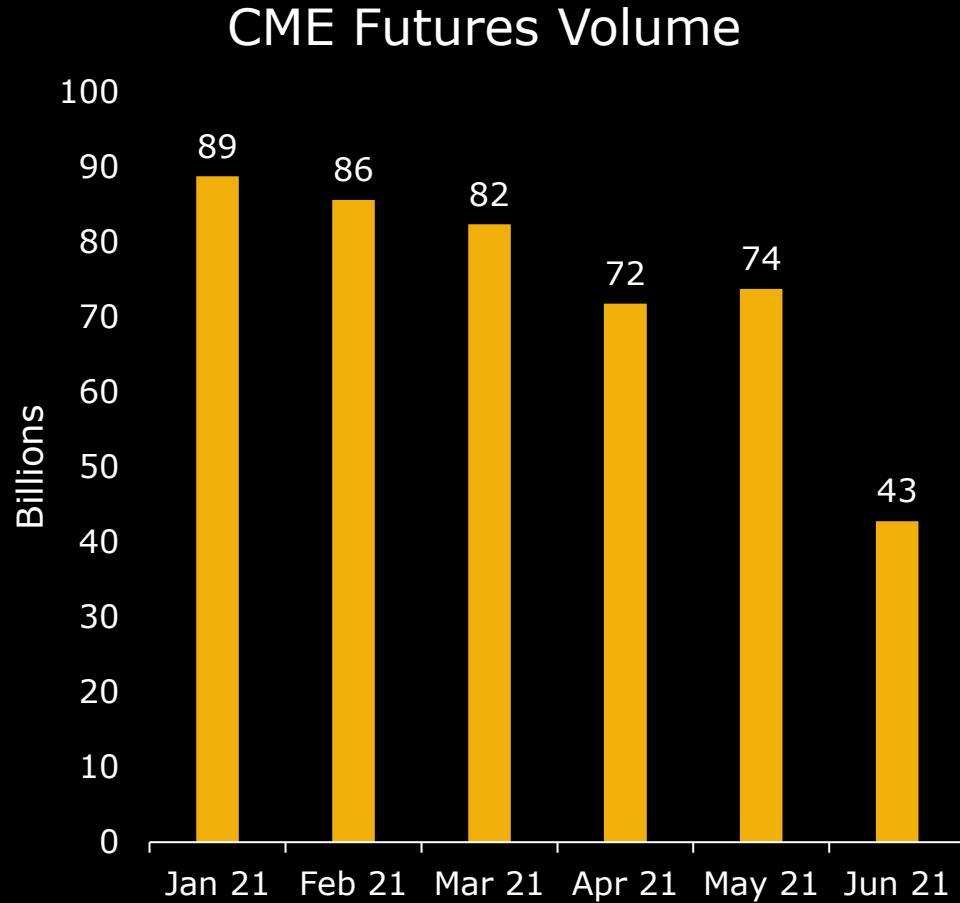


# Correlation With Bitcoin: 1Q Rolling Window





# Bitcoin Listed Derivatives





ECOSYSTEM



# Exchanges and Coinbase Listing

- *Coinbase* direct lists at \$85b, slides down to \$65b, attests itself at \$50b
- *Kraken* may go public via direct listing by end of 2022
- Banks cut ties with *Binance*, affecting deposits and withdrawals
- The Italian *Young Platform* has raised €3.5 million in a new funding round



# Price Influencers



**Elon Musk** Tesla investment, change of heart, Anonymous threat,  
Tesla (does not) accepts Bitcoin



Mexico's 3rd richest man **Pedro Salinas**:  
It is absolutely right to think of Bitcoin as the new gold



Billionaire **Paul Tudor Jones**:  
I like Bitcoin and want to have 5% of my portfolio in Bitcoin



CEO **Michael Saylor**: MicroStrategy triples down on bitcoin



**George Soros'** Investment Fund Is Reportedly Trading Bitcoin  
Products



Hedge Fund Billionaire **Ray Dalio**:  
I Have Some Bitcoin, cash is thrash

# El Salvador: Legal Tender Bitcoin



- Bitcoin to become legal tender in El Salvador on Sept 7
- Nayib Bukele's bitcoin Law, announced by Jack Mallers at Bitcoin Miami Conference
- World Bank rejects El Salvador request for help on bitcoin implementation
- IMF sees legal, economic issues with El Salvador's bitcoin move



# Bitcoin Financial Services

- 1 in 6 Hedge Funds Plan to Invest More Than 10% in Crypto
- Brokerage and/or Custody: Goldman Sachs, BBVA, Morgan Stanley, State Street, Standard Chartered, JP Morgan
- HSBC CEO: Bitcoin is not for us
- Custodians:
  - Galaxy Buy BitGo For \$1.2 Billion
  - Copper.co secures \$50 million Series B investment
  - Finoa raises \$22 million in Series A funding
  - CheckSig obtains SOC 1 and SOC 2 attestations
- *Opinion:*  
«La custodia sicura di Bitcoin», P. Mazzocchi

Fisco |

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## SICUREZZA DELLE TRANSAZIONI

### La custodia sicura di bitcoin

Paolo Mazzocchi

*Bitcoin e crypto-asset hanno caratteristiche straordinariamente diverse da quelle dei beni usualmente custoditi dalle banche depositarie o difesi dalla pratiche di cyber-security degli istituti finanziari tradizionali*

**L**a custodia sicura di *bitcoin* si ottiene curando sia aspetti strettamente tecnologici, sia aspetti funzionali e di processo. È inevitabile che la comprensione dei primi sia in qualche modo preliminare per poter comprendere gli ultimi: il lettore dovrà quindi avere una attitudine curiosa, metodica e paziente per cogliere i diversi passaggi qui affrontati. Le considerazioni che seguono si applicano in linea di massima con pochi adattamenti anche ai numerosi *crypto-asset* che sono venuti dopo *bitcoin*, avendone questi mutuato la maggioranza delle scelte tecnologiche architettonicali.

La sicurezza di *bitcoin* è basata su un libro mastro, chiamato *blockchain*, dove sono registrate tutte le transazioni ed i criteri con cui possono essere trasferiti i *bitcoin* esistenti. La sicurezza delle singole

chiave pubblica è utilizzata da chiunque per verificare la genuinità delle firme digitali prodotte dalla corrispondente chiave privata. La chiave pubblica deriva dalla chiave privata ma la chiave privata non può essere derivata dalla chiave pubblica.

Esistono, poi, anche gli *indirizzi*: un indirizzo deriva da una chiave pubblica ma la chiave pubblica non può essere derivata dall'indirizzo. Insomma, la derivazione procede dalla chiave privata verso la pubblica per arrivare poi all'indirizzo, ma non può essere percorsa in senso inverso. La chiave privata è cruciale perché permette la "spesa" dei *bitcoin* associati all'indirizzo corrispondente. È possibile generare arbitrariamente chiavi private e le loro corrispondenti chiavi pubbliche e indirizzi, senza dover chiedere alcun tipo di autorizzazione. Anche per

controllato da Bob. Alice dovrà (i) comporre un messaggio transazionale che include la quantità di *bitcoin* che vuole trasferire, la sua chiave pubblica e l'indirizzo di Bob, (ii) firmare con la sua chiave privata questo messaggio che sarà poi inoltrato alla rete *bitcoin*. Tutti i nodi della rete *bitcoin*, avendo accesso alla chiave pubblica di Alice, potranno indipendentemente verificare che (i) la quantità di *bitcoin* che Alice vuole trasferire è realmente associata al suo indirizzo; l'indirizzo deriva infatti dalla chiave pubblica e sulla *blockchain* (il registro pubblico delle transazioni) si può verificare quanti *bitcoin* sono associati ad un certo indirizzo; (ii) la firma del messaggio transazionale è valida e quindi il messaggio non è stato modificato ed è stato firmato proprio con la chiave privata associata all'indirizzo da cui si vogliono trasferire i *bitcoin*.

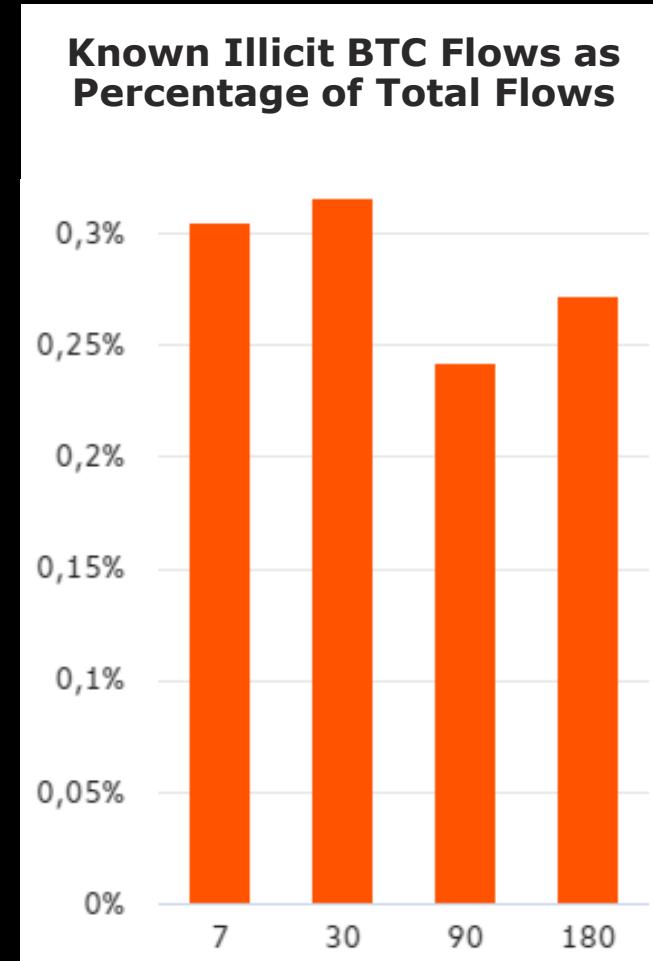


# Ransomware: The Colonial Pipeline Hack

- Hackers breached system using single 'compromised' password
- US Recovers Bitcoin Paid to Colonial Pipeline Hackers
- How Did the Feds Seize the Colonial Pipeline Ransomware Bitcoins? Bitcoin was NOT hacked. Ransom hackers used a rented cloud server
- Untraceable Bitcoin Is a Myth (WSJ)
- Ransomware Investigations Elevated To Same Level As Terrorism
- Insurer AXA halts ransomware crime reimbursement in France

# Bitcoin and Crime

- National risk assessment of money laundering and terrorist financing 2020 by UK HM Treasury
- The 2021 Crypto Crime Report by Chainalysis
- An Analysis of Bitcoin's Use in Illicit Finance By former Acting CIA Director Michael Morell
- Israel-Gaza Conflict Spurs Bitcoin Donations to Hamas



Source: markets.chainalysis.com



# NFT: a Global Trend? Not Really, Not Yet

- NFT Investments raises £35m through London listing
- Luxury fashion brands poised to join the NFT party
- Sotheby's Embarks on NFTs With Digital Creator Pak's 'The Fungible Collection'
- Non-fungible utility token appears to be more promising than art: Socios.com and New Jersey Devils Join Forces
- Sotheby's Will Accept Crypto for Banksy's 'Love is in the Air' and special diamond auction



Love is in the Air - Banksy



REGULATION



# Central Bank Digital Currency



- Bank of International Settlements: CBDCs are an opportunity for the monetary system
- Bank of Israel, Nigeria, Bank of Russia, Bank of England, South Korean Central Bank, Bank of Japan, Banque de France, ECB: all plan pilot digital currency
- Swiss National Bank Has No Plans for a Digital Currency
- ECB launches digital euro project; investigation phase to last 24 months
- Fabio Panetta, Chair of the Digital Euro Task Force: "We will engage with the European Parliament and decision-makers and inform them regularly about our findings. Citizens, merchants and the payments industry will also be involved"

# Regulators

- PBoC orders Chinese banks to cut off accounts for crypto OTC merchants
- Mexico's Finance Minister Confirms Cryptos Are Banned From Financial System
- EU MiCA Consultation
- FATF Proposes Updated Guidance for Cryptocurrency Regulation



# Italian Regulators



**April 28** - Consob e Banca d'Italia mettono in guardia contro i rischi insiti nelle cripto-attività

**June 14** – Paolo Savona (Consob):

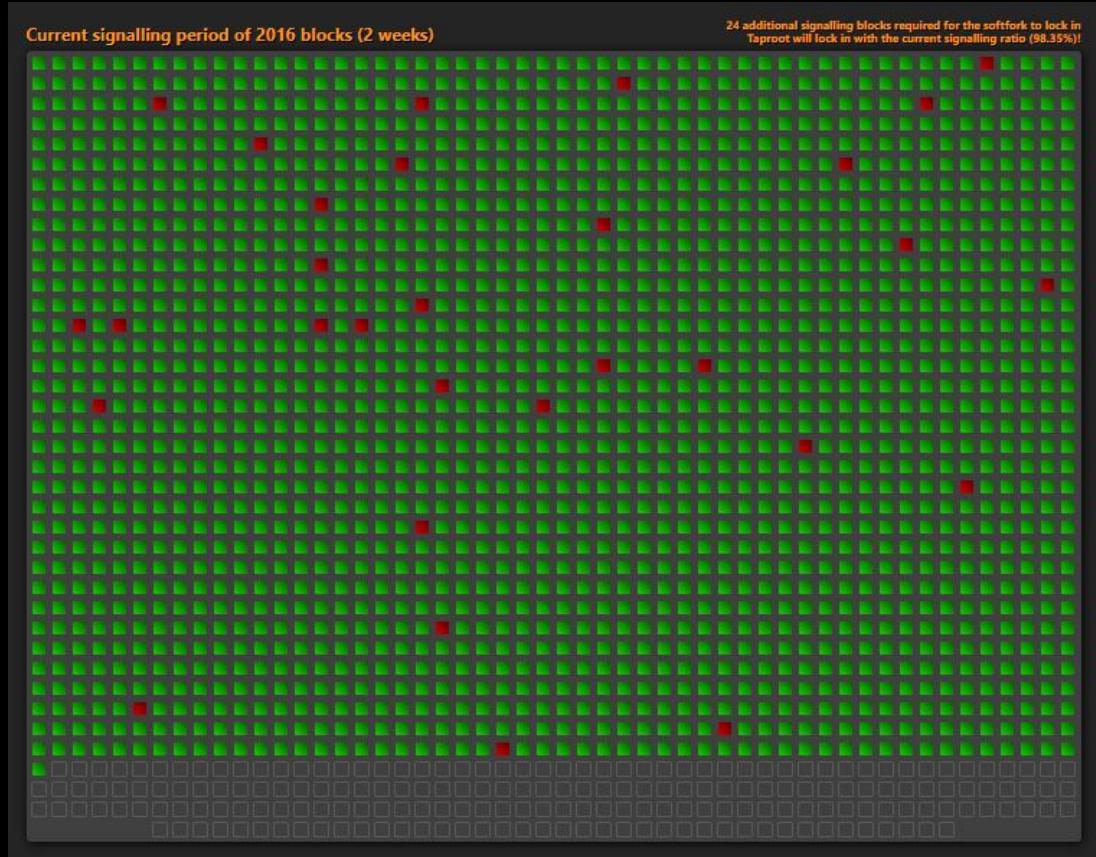
- ‘Le criptovalute sono fiume in piena, con rischi per tutela del risparmio. C’è bisogno di regole.’
- ‘E’ necessaria l’attivazione in Italia di strutture di consultazione formale tra organi di Governo e autorità indipendenti che imprimano un indirizzo unitario alle scelte in materia, anche in vista della posizione da assumere di fronte alle iniziative europee e internazionali in corso.’
- ‘Impegno educativo e formativo come viatico di successo per le scelte da effettuare.’



TECHNOLOGY



# Taproot Locked-In !!

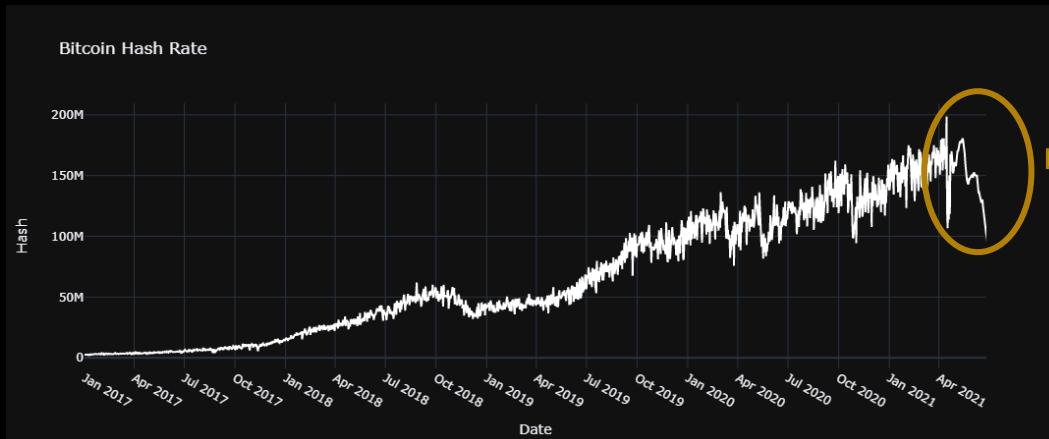


- Taproot is a Bitcoin protocol upgrade deployed as a backward-compatible soft fork. **Taproot expands Bitcoin's smart contract flexibility**, while offering more privacy by letting users mask complex smart contracts as a regular bitcoin transaction.
- Starting May 1, miners had three months to signal their Taproot readiness, with a threshold of **90% of the blocks in a difficulty period** (2016 blocks)
- The threshold has been reached on June 12
- Activation will be in November

# Mining: The Hash Rate Migration



- China crack down all mining activities in June
- Beijing said that it started to crack down on mining due to its heavy reliance on cheap power and related impact on the environment
- Chinese miners are shipping bitcoin mining equipment to the US or, like BTC.com, to Kazakhstan
- Bitmain Suspends Sales of Bitcoin Mining Machine Amid China Crackdown



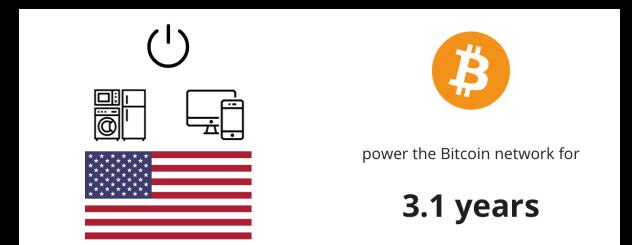
The worst drawdown in hash rate

# Environmental Sustainability

**Cambridge Center for Alternative Finance (CCAF):**



- Bitcoin consumes 0.55% of global electricity production, roughly equivalent to the annual energy of small countries (Malaysia, Sweden)
- In 2019 73% of energy consumption came from hydroelectric (mainly in China)
- A lot of new mining farms in Texas are using solar power
- Bitcoin energy consumption is less than the amount of electricity consumed every year by always-on but inactive home devices in USA



# The Blockchain Decline

- The European Investment Bank has issued its first ever digital bond on a public blockchain
- JPMorgan, DBS, and Temasek form new blockchain firm to improve cross-border payments
- New York Launches a Blockchain-Powered COVID-19 Passport





THE INSTITUTE

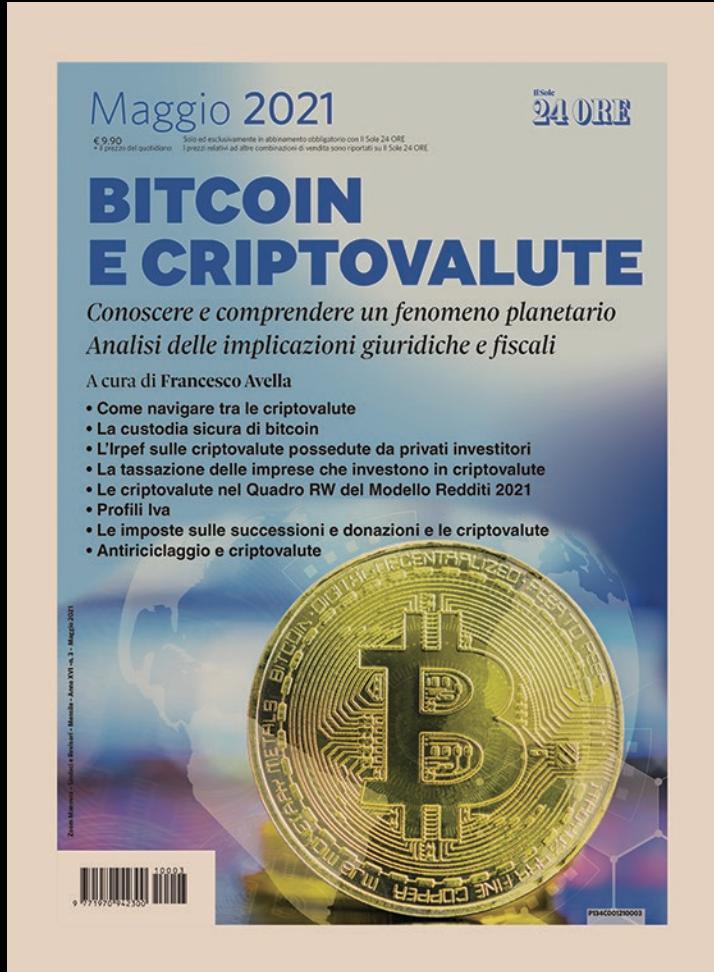


# Cryptocurrency Open Patent Alliance

- COPA is a non-profit community of like-minded people and companies formed to encourage the adoption and advancement of cryptocurrency technologies and to remove patents as a barrier to growth and innovation.
- COPA members pledge never to use their crypto-technology patents against anyone, except for defensive reasons, effectively making their patents freely available for all to use.
- COPA members pool all their crypto-technology patents together to form a shared patent library.



# Instant-Book - Il Sole 24 Ore



“*Crypto-Assets: a Planetary Phenomenon to Understand.*”

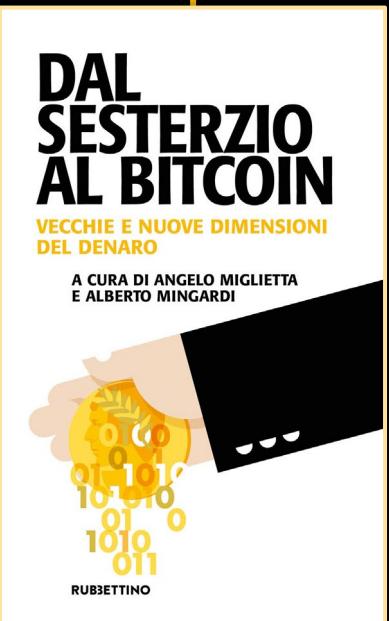
Il Sole **24 ORE**

[www.dgi.io/2021/05/11/il-sole-24-ore](http://www.dgi.io/2021/05/11/il-sole-24-ore)

# Webinars



## Lodi Liberale



[www.dgi.io/2021/04/16/lodi-liberale](http://www.dgi.io/2021/04/16/lodi-liberale)

## Allianz Bank Business Forum 2021



[www.dgi.io/2021/04/15/allianz-bank-bf](http://www.dgi.io/2021/04/15/allianz-bank-bf)

## Intesi Group



[www.dgi.io/2021/05/27/timestamp](http://www.dgi.io/2021/05/27/timestamp)

# Webinars



## Lions Club

LIONS CLUB INTERNATIONAL  
Lions Club San Daniele del Friuli

**FERDINANDO AMETRANO**  
DOCENTE DI  
BITCOIN E BLOCKCHAIN TECHNOLOGY  
UNIVERSITÀ MILANO-BICOCCA

introduce  
**Giorgio Beltrame**  
Presidente LC San Daniele del Friuli

Conduce  
**Gabriele Turissini**

**Bitcoin nella storia della moneta**

17 giugno 2021 - ore 20.45

In diretta streaming sui canali  
Facebook e YouTube del Lions Club San Daniele del Friuli

## Fintastico

ATTIVIAMOENERGIEPOSITIVE.IT  
WEBINAR GRATUITO

**Bitcoin: stato attuale e sviluppi futuri**

Ferdinando Maria Ametrano & Fabrizio Villani

23 Giugno 2021  
17:00-18:00

**Cresce, crolla e ricresce:**  
*Bitcoin resiste agli attacchi e continua a evolvere diventando sempre di più di interesse anche per le corporate e i players finanziari.*

## Refink – A&C Law C.C. Marcello Candia

Refink  
Business stories with "law"

Il miglior modo per prevedere il futuro è crearlo.  
A Lincoln

Annonzata&Consò è lieta di invitare la S.V. alla tavola rotonda in programma

**GIOVEDÌ' 24 GIUGNO, 8.45-9.30**

**La custodia dei cripto-asset nel sistema finanziario**

Lo sviluppo di soggetti che forniscono i servizi di custodia dei cripto-assets costituiscono un tassello indispensabile per lo sviluppo dell'industria, attraverso l'aumento della sicurezza nella detenzione degli stessi e lo sviluppo di sistemi di controllo dell'attività degli altri operatori che intermediano o gestiscono i cripto-assets.

Ferdinando M. Ametrano  
Annonzata&Consò  
Mariano Carozzi  
Annonzata&Consò  
Antonio Di Giorgio  
Annonzata&Consò

con il patrocinio del Comune di Melzo  
CITTÀ di MELZO  
Città metropolitana di Milano

**Date a Cesare quel che è di Cesare**

**La moneta è solo di Cesare?  
Cos'è la moneta? E il Bitcoin?**

**Ferdinando Ametrano**  
Bitcoin & Blockchain Technology  
Università Milano - Bicocca  
Fondatore e Direttore Scientifico  
Digital Gold Institute  
Amministratore Delegato di CheckSig  
Servizi di custodia Bitcoin

**Venerdì 25 giugno, ore 21**

**in streaming sul canale YouTube  
del Centro Culturale Marcello Candia**

[www.dgi.io/2021/06/17/lions-club](http://www.dgi.io/2021/06/17/lions-club)

[www.dgi.io/2021/06/23/fintastico](http://www.dgi.io/2021/06/23/fintastico)

[www.dgi.io/2021/06/24/ac](http://www.dgi.io/2021/06/24/ac)

[www.dgi.io/2021/06/28/cc-marcello-candia](http://www.dgi.io/2021/06/28/cc-marcello-candia)

# Media Appearances



**Linklaters**

**TG3**

**Class CNBC**  
CNBC

**RSI**  
Radiotelevisione  
svizzera

**Il Sole 24 ORE**

**We WEALTH**

**Linklaters**

[www.dgi.io/2021/06/25/linklater](http://www.dgi.io/2021/06/25/linklater)

**Fuori TG – TG3**

[www.dgi.io/2021/06/16/fuoritg-tg3](http://www.dgi.io/2021/06/16/fuoritg-tg3)

**Class CNBC**

[www.dgi.io/2021/06/15/class-cnbc](http://www.dgi.io/2021/06/15/class-cnbc)

[www.dgi.io/2021/06/05/class-cnbc](http://www.dgi.io/2021/06/05/class-cnbc)

[www.dgi.io/2021/05/19/class-cnbc](http://www.dgi.io/2021/05/19/class-cnbc)

**Radio Televisione Svizzera**

[www.dgi.io/2021/06/07/rsi](http://www.dgi.io/2021/06/07/rsi)

**Il Sole 24 Ore**

[www.dgi.io/2021/06/06/il-sole-24-ore](http://www.dgi.io/2021/06/06/il-sole-24-ore)

**We Wealth**

[www.dgi.io/2021/06/04/we-wealth](http://www.dgi.io/2021/06/04/we-wealth)

[www.dgi.io/2021/05/24/we-wealth](http://www.dgi.io/2021/05/24/we-wealth)

[www.dgi.io/2021/05/14/we-wealth](http://www.dgi.io/2021/05/14/we-wealth)

[www.dgi.io/2021/04/17/we-wealth](http://www.dgi.io/2021/04/17/we-wealth)

**Rai Radio 1**

**IL FOGLIO**  
quotidiano

**adnkronos**

**il POST**

**Startupitalia!**  
Startupitalia!

**Rai News 24**

**Le IENE**

**Agenda Digitale**  
Digitale.eu

**Rai Radio 1**

[www.dgi.io/2021/05/20/rairadio1](http://www.dgi.io/2021/05/20/rairadio1)

**Il Foglio**

[www.dgi.io/2021/04/28/il-foglio](http://www.dgi.io/2021/04/28/il-foglio)

**Adnkronos**

[www.dgi.io/2021/04/27/adnkronos](http://www.dgi.io/2021/04/27/adnkronos)

[www.dgi.io/2021/04/26/adnkronos](http://www.dgi.io/2021/04/26/adnkronos)

[www.dgi.io/2021/03/29/adnkronos](http://www.dgi.io/2021/03/29/adnkronos)

**Il Post**

[www.dgi.io/2021/04/23/il-post](http://www.dgi.io/2021/04/23/il-post)

**StartUpItalia!**

[www.dgi.io/2021/04/22/smartmoney](http://www.dgi.io/2021/04/22/smartmoney)

**Rai News24**

[www.dgi.io/2021/04/21/rai-news](http://www.dgi.io/2021/04/21/rai-news)

**Le Iene**

[www.dgi.io/2021/04/19/le-iene](http://www.dgi.io/2021/04/19/le-iene)

**Agenda Digitale**

[www.dgi.io/2021/04/18/agenda-digitale](http://www.dgi.io/2021/04/18/agenda-digitale)

# Next Training Sessions

- **Entry-level and Advanced** Training
- **Focus:** Bitcoin, crypto-asset, blockchain, distributed ledger, smart contract, and cryptography
- Next sessions:
  - 14-15 september 2021
  - 14-15 december 2021
- **[www.dgi.io/workshop](http://www.dgi.io/workshop)**



# CryptoWeek: Every Friday at 6PM

- The most relevant news about bitcoin, crypto-assets and blockchain
- Live streaming:
  - YouTube
  - Facebook
- Also available as podcast
- [www.dgi.io/cryptoweek](http://www.dgi.io/cryptoweek)



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# CAL2021: Save The Date

WEB STREAMING  
November 4-5

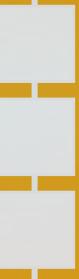
3rd  
Crypto Asset Lab  
Conference · CAL2021

Investments, Economics, and Regulation  
for Bitcoin and Crypto Assets.

**Crypto Asset Lab**  **UNIVERSITÀ DEGLI STUDI DI MILANO BICOCCA** **Digital Gold Institute**

**CheckSig**  
TRANSPARENT BITCOIN CUSTODY  
Gold Sponsor

<https://cryptoassetlab.diseade.unimib.it/calconf/>



INVITED SPEAKER



# Guest Speaker

## **Andrea Cattaneo**

General Manager Italy  
Head of Italy, Switzerland & Iberia

**BNP Paribas Securities Services**



**I digital-asset nel mondo finanziario europeo**



*Scarcity in the Digital Realm*

**Contacts:**

[www.dgi.io](http://www.dgi.io) | [info@dgi.io](mailto:info@dgi.io)

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