Bitterfly Consultancy

# Quarterly factsheet

## Q2/2023

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# Contents



## About metrics

We try to make our charts as clear as possible. When comparing bitcoin to other assets, we start from a base value of 100%. We then look at how much that value has changed over the rest of the period. Correlations show the possible relationship between assets, or their relationship to the overall performance of the economy. Volatility shows the fluctuations in the price curve, its manipulability by investor behaviour, but tells us nothing about the long-term trend.

# How bitcoin fared v Q2

In each of the **last 4 quarters**, **bitcoin underperformed** the previous year. The **bull market**, which **peaked in autumn 2021**, was followed by a **decline that lasted until mid-2022**. The **next 2 periods** were marked by a **slight decline**, with **growth resuming in early 2023**. As a result, bitcoin **investors are back in the green** for the first time in a long time.

**Bitcoin is up 83% since the start of 2023**. But it still hasn't managed to regain the lost heights of the $65,000 highs. In the **second quarter**, bitcoin's **high was $30,695**. The quarter started at $28,411.

But we are still not in a bull market. We call the **current situation a consolidation phase**. This means that the price should be **stable for a few more months**, with fluctuations only caused by **exceptional events**. Even in the second quarter of this year, the price was hovering around $26,000 before **being spurred** on by the announcement of an **application for a bitcoin ETF from BlackRock**.

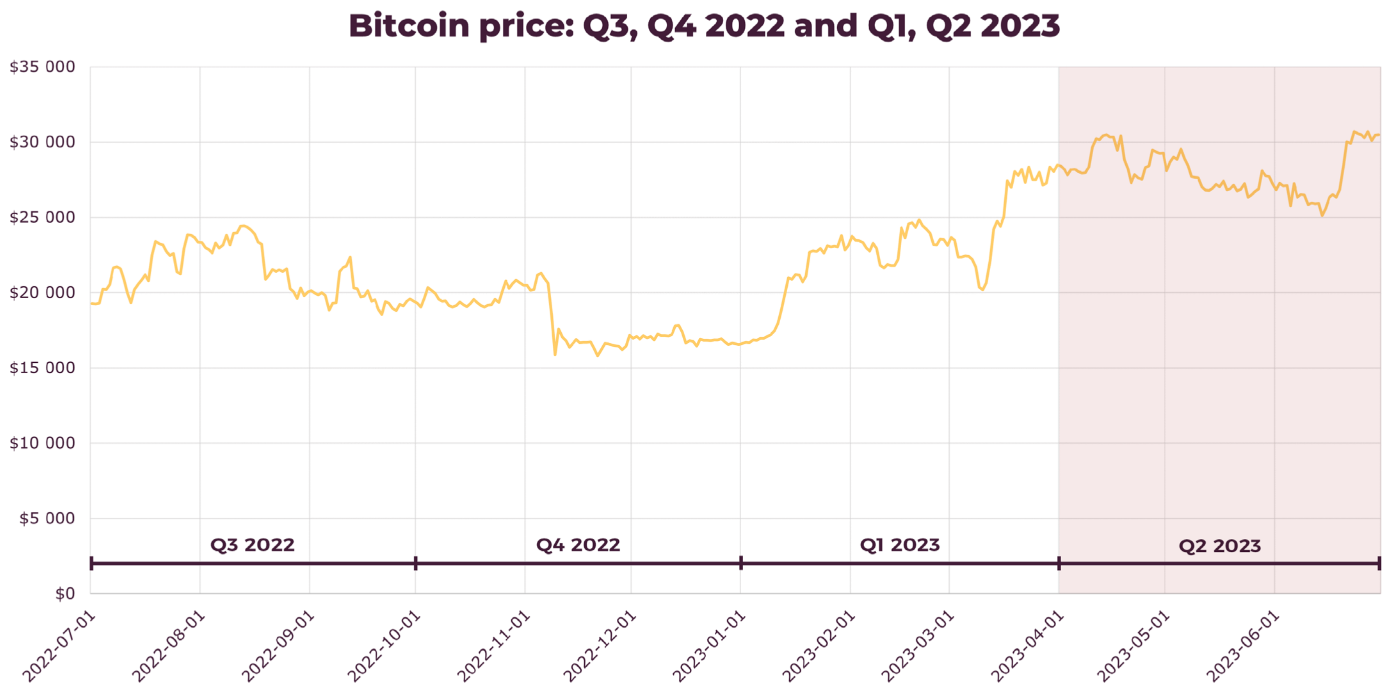
**Consolidation** is characterised by **low trading volumes**, **little activity** from **venture capitalists**, crypto firms optimising their operations, or **declining stablecoin market capitalization**.

The consolidation phase should be **followed by a bull market** and profits for those who bought during the bear market or consolidation phase. This scenario is also helped by the fact that the **worst of the crises** associated with the Terra, Three Arrows Capital and FTX cases **took place in 2022**, and the market is only now dealing with their reverberations.

The only **comparable threat** at the moment are the **lawsuits against Binance**, the largest exchange. We are also in an unusual situation as **bitcoin has never faced a period of high interest rates** when there are fewer funds available for investment.

The **bull market should start no later than April 2024**, when **bitcoin halving** shall occur. The **price to mine 1 BTC** will then rise to at least **$40,000**. Miners will then find it unprofitable to sell at a lower price, so the price should rise.

Whether bitcoin will do well will be determined by various, often conflicting, phenomena and actions of different actors. They could be categorised as 1) **the macroeconomic situation**, 2) **regulation**, 3) the interest of companies from the **world of traditional finance**.



# Macroeconomic situation

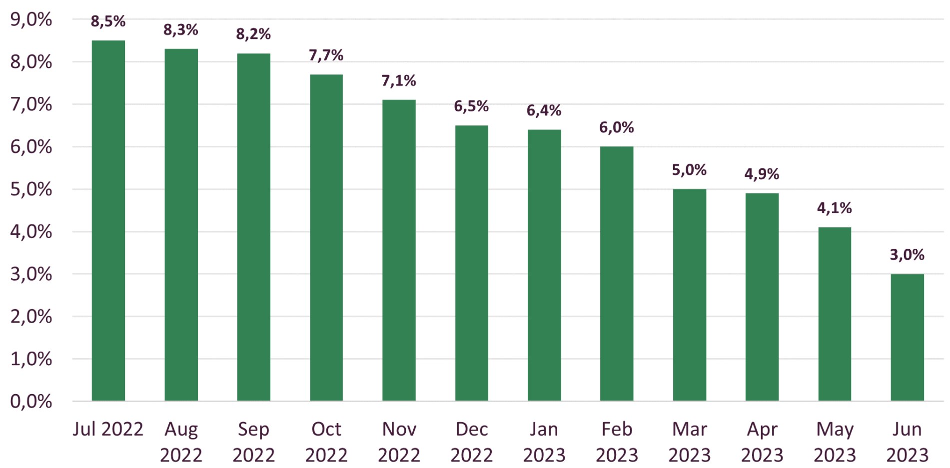
**High inflation** is the main reason why the **US Federal Reserve** continues to **raise interest rates**. It is likely to continue to do so, even though the **original target of 5.1% has been reached** and **inflation** is actually **falling**.

High interest rates have led to the **collapse of several banks**. Others have **unrealised losses** and are also at risk. Higher interest rates could **trigger a crisis** in the **housing market**, as some people will not be able to afford to repay their mortgages, and the **barriers to entry** into the housing market for lower income groups **will increase** significantly.

However, the economic crisis now seems less of a threat to the Fed than high inflation.

## Inflation

**Inflation** in the **United States** has the biggest **impact on the cryptocurrency market**. Inflation is also the **main indicator** that the US Federal Reserve (**Fed**) monitors to decide whether to **continue raising interest rates**. This can happen until the country's inflation reaches its stated annual **target of 2%**.




Year-on-year **inflation** in the US has been **falling steadily since June of 2022** and continued to do so in the second quarter of this year. In **April** it was **4.9%**, only slightly down from **5%** in **March**. In **May** it fell by a full percentage point to **4%**. The trend continued in **June**, when inflation fell for the **12th consecutive month** to **3%**.

Despite the positive developments, there are a number of **phenomena** that **worry the Federal Reserve**. The biggest concern is **housing prices**, which account for about a **third of the consumer basket**. The Fed is also concerned about **core inflation**, which excludes housing and energy prices.

It has been **above the level** of the **overall consumer basket** since March. In **June** it was **4.8%**. But here, too, **housing prices** are the **main driver**.

## Interest rates

In the second quarter there were **two meetings** of the Federal Open Market Committee (FOMC), the executive body of the US **Federal Reserve**. The FOMC decides whether and by how much interest rates should be changed.

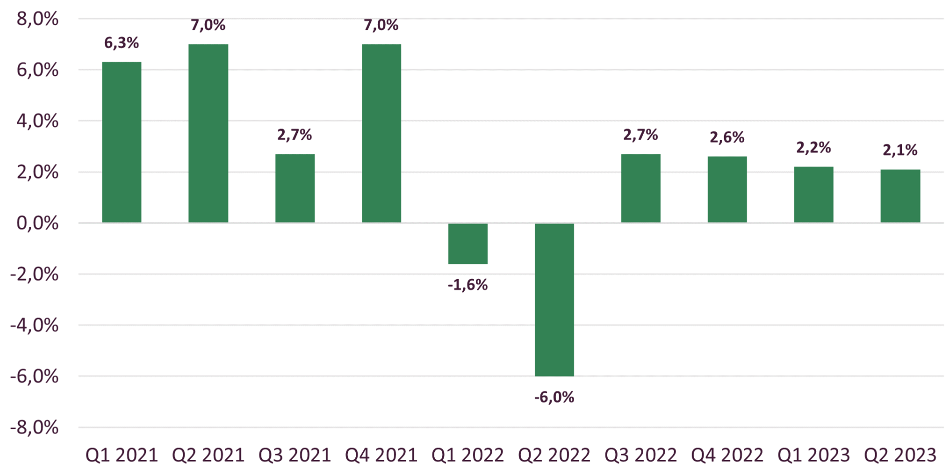
The **first meeting** of the second quarter was held on **2 and 3 May.** After the meeting, **interest rates were** rised by a further **0.25 basis points**, i.e. to a range between **5% and 5.25%**, **reaching** the originally stated **target of 5.1%**. This is the highest level in 16 years.

After the FOMC **meeting on 13 and 14 June**, **interest rates** were **left unchanged** at a range of 5% to 5.25%. Despite the **significant decline in inflation** and the achievement of the target, the **FOMC indicated** that **interest rates could rise further**. Fed Chairman Jerome Powell has even said that **another hike is likely this year**.

## GDP

**Annualised GDP** in the United States **grew by 2.1%** in the second quarter, above estimates of 2%. It was down from the **first quarter,** when it grew by **2.2%**.

A **technical recession** was declared in the **second quarter of 2022** after two consecutive falls in GDP, but no actual recession occurred. Over the past year, **economic indicators** have generally **exceeded estimates**. As a result, **yields** on **two-year bonds** have been **higher** than those **on ten-year bonds**, a phenomenon known as an **inverted yield curve**. Most **economic downturns** occur **within a year of the occurence of this phenomena**.




## Banking crisis

Several **banks were shut down** in the first quarter. The **largest** was **Silicon Valley Bank**. The **crypto sector** was hit particularly hard by the **collapse of Silvergate Bank** and **Signature Bank**. At the time, there was already talk of problems at First Republic Bank, which was bailed out by $30 billion in deposits from the largest US banks.

In **April**, **First Republic Bank** released its **quarterly earnings report**, which showed that **deposits fell by 41% to $105 billion** in the period, compared with expectations of $135 billion. At the time, it issued a statement that it was considering **selling between $50 billion and $100 billion of bonds**, which it would **sell at a loss** due to **rising interest rates**. This caused **panic in the market** and the bank's **shares lost two-thirds of their value**. On 1 May, an agreement was reached to **sell** First Republic Bank **to JPMorgan Chase**, the largest US banking group. The latter also took over $93.5 billion in deposits and most of First Republic Bank's assets.

Some **reasons** for the **continuation** of the banking crisis **still remain**:

1. In times of high interest rates, **bank customers have a variety of ways of earning a higher return** on their money than by keeping it in a bank account. One of these is to **buy government bonds directly**.
2. Another is that banks might be forced to **take the losses** on the assets that **have bought**. Smaller banks in particular are at greater risk.

**Current regulations focus** mainly **on credit risk**, i.e. the cascading effect of loan defaults. But they **ignore** the **risks** associated with **rising interest rates**.

# Regulation by enforcement

The **United States** still **lacks regulation** specific to the **cryptocurrency industry**. The US **securities (SEC)** and **commodities (CFTC) regulators apply existing laws** to the sector that apply to assets under their jurisdiction. If a court rules that an asset is either a security or a commodity, they can continue to use that decision as precedent.

The regulator will say that the digital asset is, for example, a security. It will then say that it has not been registered with it as a security and that the exchange offering it is accused of not being authorised to broker securities trading. The **regulators are using the lawsuits** to mark their territory and **extend their reach**.

## Binance – CFTC

The Commodity Futures Trading Commission (**CFTC**) has **sued Binance**, the world's largest crypto exchange, the exchange's **CEO Changpeng Zhao** and former compliance officer Samuel Lim have also been charged.

The **most serious allegation** is that **Binance deliberately circumvented US laws**, in particular **anti-money laundering** and anti-terrorist financing laws. In practice, this means that **US citizens** whose identities had not been verified could have **traded on the exchange**. Binance allegedly facilitated this by **advising them on how to use VPNs**.

To **avoid** the **scrutiny of US regulators**, they would advise wealthier clients on how to **set up shell companies** in places with **looser regulations**, such as Jersey, the British Virgin Islands and the Netherlands.

The CFTC alleges that **Binance** has been **building this VIP clientele**, including institutional clients, **since its early days**. This is evidenced by Binance's management communication records. According to the CFTC, Binance's **efforts to comply with the law were sham**.

There were also **allegations of market manipulation**. Binance and related entities had approximately **300 accounts on Binance**. These included accounts belonging to Merit Peak and Sigma Chain. Two accounts also belonged directly to CEO Changpeng Zhao. Binance admitted that the aforementioned companies provided liquidity to the exchange.

In order for Binance to be charged by the commodities regulator, commodities would have to be traded on it. **Commodities identified in the lawsuit** include bitcoin (**BTC**), ether (**ETH**), litecoin (**LTC**), tether (**USDT**) and Binance USD (**BUSD**). At least **ETH and BUSD have been designated as securities by securities regulators** in the recent past. In recent months, it has become common for regulators to attempt to define their scope in similar lawsuits.

In the lawsuit, the CFTC is **seeking fines**, a **permanent trading ban** and the **revocation of Binance's registration**. As a result, Binance would not be allowed to offer futures or spot trading, nor would it be able to obtain a registration to do so in the future. If the **coordinated actions of Binance and Binance.US** could be proven, it would also mean the **end of the US branch**.

**Binance International** would **lose access to US banks**. They would likely be joined by banks from partner countries such as the EU, UK, Canada, Australia, South Korea and Japan.

The big blow could be a **demand for the return of all the money ever spent here by American citizens**, which could run into billions of dollars. The exchange could be fined on top of that.

The **darkest scenario** would be the **end of Binance**, although **Binance International could continue to operate** in countries that choose to allow their banks to trade with it and accept deposits directly in cryptocurrencies.

## Binance – SEC

3 months after the CFTC, the US Securities and Exchange Commission (**SEC**) has also **sued Binance**. The case involves **Binance International, Binance.US and CEO Changpeng Zhao**.

At the heart of the case is the **allegation that unregistered securities**, by which the regulator means cryptocurrencies, **were traded**. The accused companies **did not register as an exchange, broker-dealer or clearing agency**. Moreover, they **offered** these **services under the umbrella of a single firm**, which is unacceptable in traditional finance. As with the CFTC action, the SEC must prove that **US citizens were trading on Binance International**.

Several **Binance products** are alleged to be **securities**: the **BNB coin**, the **BUSD stablecoin**, the **earn products** and their **staking programme**. The lawsuit also alleges that **10** of the **assets** offered are **securities**: SOL, ADA, MATIC, ATOM, ALGO, FIL, MANA, SAND, AXS and COTI.

This is **unlikely** to be the **end of the road for Binance International**, as **US regulators do not have the resources to enforce the law.** But the mounting pressure could lead to the **end of Changpeng Zhao's tenure at Binance**. Either way, it's a signal that regulators don't want global crypto exchanges that aren't registered anywhere.

## Coinbase

A day later, the **SEC sued US exchange Coinbase**. The move is surprising because this is a **publicly traded company**, which is **subject to higher standards of scrutiny** than, say, Binance.

The SEC claims that this **exchange combines 3 different types of entities: brokers, exchanges and clearing houses**, which **should be separate**. They also claim that their **staking service** is an investment contract and therefore a **security**.

Even in the case against Coinbase, **some tokens and cryptocurrencies were described as securities**. As in the Binance case, these were SOL, ADA, MATIC, FIL, SAND and AXS. New tokens included CHZ, FLOW, ICP, NEAR, VGX, DASH and NEXO. These tokens are potentially **at risk of being removed from trading at he venue**.

## Bittrex

The **SEC** has also sued **another crypto exchange, Bittrex**. One of its founders and former CEO, William Shihara, is also facing charges. The crux of the case is that **Bittrex failed to register as a securities exchange, broker and clearing agency**.

The defendants also allegedly **failed to comply with US laws**. Before Bittrex made the asset available on its platform, it should **have instructed its applicants to remove** statements about "price predictions", "profit expectations" and other **"investment-related terms" from the product description**. This is supposed to prove that Bittrex knew the product was a security.

This is despite the fact that its **US subsidiary announced its closure** in May and subsequently **filed for bankruptcy**.

# Regulation by law

While the European Union has passed a comprehensive crypto regulation, MiCA, and other jurisdictions, most recently Hong Kong, have already established a clear path for crypto companies to register, the United States still cannot find a consensus.

The first logical step should be to regulate stablecoins. The new proposal is the fourth, and it is still uncertain whether the consensus needed to pass it will be found. Another issue to be resolved is how to register digital asset service providers and digital asset owners.

## Exchanges

A bill has been introduced in the US House of Representatives that would more clearly define the scope of the SEC and CFTC's authority to regulate the cryptocurrency market. It would give crypto firms a legal way to register as an Alternative Trading System (ATS) platform. These are over-the-counter platforms that connect buyers and sellers. They are overseen by the SEC, which would not be able to ban them from offering cryptocurrency trading under this law. The legislation would allow crypto assets that are designated as securities to be traded on other platforms that fall under ATS regulation. These are mostly broker-dealers.

The SEC has announced that it will apply the rules that apply to centralised exchanges to decentralised ones. Decentralised protocols, which are often not even legal entities, will have to register as exchanges or broker-dealers. The Commission still has to approve the broadening of the definition of an exchange. After that, we can expect the SEC to start suing DeFi projects as well.

## Stablecoins

A proposal for new regulation of stablecoins has been drafted in the House of Representatives. It will now be taken up by a new crypto-focused subcommittee of the Financial Services Committee.This is a regulation that the US wants to pass with the utmost urgency.However, disagreements between Democrats and Republicans have so far made this impossible.

If this proposal were to become law, it would mean that all non-bank institutions wishing to issue stablecoins such as Tether and Circle would need permission from the Fed.Banks and credit unions would have to register with the regulator they already fall under, either the National Credit Union Administration (NCUA), the FDIC or the OCC. Banking regulators and the National Institute of Standards and Technology would be tasked with setting standards for interoperability between stablecoins, mainly technical and legal specifications.A two-year moratorium on the creation of stablecoins that are not backed by fiat currencies, stocks, commodities, etc. would begin.This is mainly a ban on algorithmic stablecoins.However, existing stablecoins could continue to exist.

## Custody

In early March, the SEC proposed a rule that would require registered investment advisers to hold cryptocurrencies and other assets only with qualified custodians. This rule could prevent crypto exchanges from acting as crypto custodians.The new definition would exclude banks that are not federally licensed from this activity.

Not only crypto firms, but also traditional financial institutions and some lawmakers are joining crypto firms in complaining about the SEC's planned changes to the custody of financial assets for qualified financial advisors.In an open letter, Financial Services Committee Chairman Patrick McHenry expressed his disapproval.He was backed by the American Bankers Association and the Securities Industry and Financial Markets Association.Adoption of this rule would be a major blow to the crypto industry.

# Financial institutions in crypto

One sign of an **upcoming bull market** is the interest shown by **financial institutions**. They are showing interest in both blockchain technology and cryptocurrencies as an investment vehicle.

The range of **investment vehicles** recognised by financial regulators continues to expand. All eyes are now on the **spot bitcoin EFT** (exchange-traded fund) in the US, which has been filed by **BlackRock**.

While a similar product already exists in the EU, Brazil and Canada, **listing on a US exchange** would be a watershed moment for bitcoin, not only in terms of increasing demand for the asset, but also in terms of **legitimacy**.

## Spot Bitcoin ETF

In **June**, the **price of bitcoin surpassed $30,000** for the first time in more than a year. The catalyst for the rise was an **application for a bitcoin ETF**. Its approval would allow financial institutions to trade **bitcoin directly on a stock exchange**.

**BlackRock** is the **largest asset manager in the US**, with around $10 billion in assets under management. The optimism is also due to the fact that of the 576 ETF applications they have submitted in the past, only 1 has been rejected. In addition, their application proposes a **surveillance sharing mechanism**, the lack of which has been a thorn in the side of regulators in the past. BlackRock would **share data on trade**s, clearing activity and client identification **with Nasdaq**, where the ETF would be listed. This request triggered a **wave of interest from financial institutions** in the cryptocurrency market. In a short time after BlackRock, there have been **5 other applications** for bitcoin ETFs. These include giants such as **Invesco and Fidelity.**

The approval of the ETF should have other **positive effects on the price of BTC**: a boost in **reputation**, a steady source of **demand for bitcoin**, or a signpost for other companies that may want to **offer the same product**.

## EDX exchange

A new **cryptocurrency exchange**, EDX Markets, has been launched. It has attracted attention mainly because it is **backed from the start** by some of the **biggest financial firms**, including **Citadel Securities**, **Paradigm**, **Sequoia Capital**, **Fidelity** and **Charles Schwab**.

Initially, **4 assets** will be traded: **BTC, LTC, BCH and ETH**. **None** of them have been **named in the SEC lawsuits**, which was taken into account in their selection.

EDX is **responding to lawsuits against Binance and Coinbase**, where regulators didn't like that the exchanges offered one-stop clearing, trading and custody. Therefore, EDX **only offers exchange services**. It only connects buyers and sellers, but **never holds the cryptocurrencies** itself. Trading firms send cryptocurrencies directly to each other.

## Deutsche Bank custody

Germany's largest bank, **Deutsche Bank**, has applied for a **crypto licence to become a custodian** of digital assets. It would be an **institutional product** combining hardware and software wallets.

With **connected institutional brokers**, it will also be possible to **buy and sell cryptocurrencies** on the Deutsche Bank platform. Ancillary services such as after-tax calculations, fund management, lending, staking, asset valuation and more will also be offered.

Digital asset custody is likely to be a service that banks will increasingly offer.

## Trading

**Financial institutions** are also creating various platforms and **expanding their offerings to include cryptocurrencies**. They have been interested in doing so in the past, but have been hampered by a **lack of regulation**. The imminent implementation of the **pan-European MiCA regulation** is untying the hands of **EU firms**.

Germany's **Dwpbank** has created the **wpNex platform**, on which **customers of 1,200 affiliated banks** will be able to **trade bitcoin** from the second half of 2023. The **crypto account** will be set up for customers **alongside their existing bank account** and will **not require** any **further identity verification**. The bank will hold the private keys to the crypto on behalf of clients.

**LCH**, a division of the **London Stock Exchange**, will begin **clearing bitcoin futures and options**. The clearing of digital assets will be separate from all other trading activities.

**Investment app eToro** has offered **trading crypto to Twitter users**. Customers can see up-to-date data on the prices of cryptocurrencies, stocks and other assets on Twitter by typing cash tags such as $TSLA and buy them instantly through the eToro app.

Research firm Bernstein believes **that ETH yields will play a big role** in the **next bull market**. Even in times of **high interest rates**, **returns on bank deposits do not exceed inflation**, a trend that should continue. This also makes **crypto staking more attractive**. The more interest rates fall, the more attractive crypto staking will become.

## Tokenization

Traditional **financial institutions** are interested in blockchain technology in areas other than offering bitcoin trading. This was also noted in a **survey of family offices** conducted by US bank Goldman Sachs. However, their **willingness to invest in cryptocurrencies has declined** over the past year. On the other hand, **belief in in blockchain technology** has become the **most important reason motivating** them to do so. The Coinbase exchange claims that **52% of Fortune 100 companies are investing in blockchain technology**.

Perhaps the **biggest opportunity** lies in the **tokenisation of traditional assets**. According to Bernstein Research, a tokenised investment market would be **more efficient, with lower transaction costs, more liquid and more accessible**. They also estimate that the **volume** of tokenised assets **should reach $5 trillion** over the next 5 years. Stablecoins, CBDCs, private market funds, securities and real estate are expected to make up the majority.

According to **Citigroup**, **blockchain technology is approaching a tipping point** where it should begin to live up to the hopes placed in it. In short, it will have a **billion users** who won't even know they're using blockchain. The development and adoption of technologies such as **digital identities, ZK proofs, oracles** and **bridges** are key to this.

# Comparison of bitcoin with stock indices

## About the metric

The indices are measured as a weighted average of the prices of the stocks in the index. Each index gives different weights to different aspects.

**The Dow Jones Industrial Average (^DJI)** gives more weight to companies with a higher price per share.

**The S&P 500 (^GSPC)** gives more weight to companies whose shares are available on the market. For example, if a large proportion of a company's shares have been owned and held by the founder or his descendants for many generations, the company will not carry much weight in the S&P.

For the **NASDAQ Composite (^IXIC)**, the most important criterion is the market capitalisation of the stocks traded on NASDAQ. This is then multiplied by the closing price of the day.

The **NYSE Composite (^NYA)** includes all common stocks listed on the New York Stock Exchange. It contains more than 2,000 stocks.

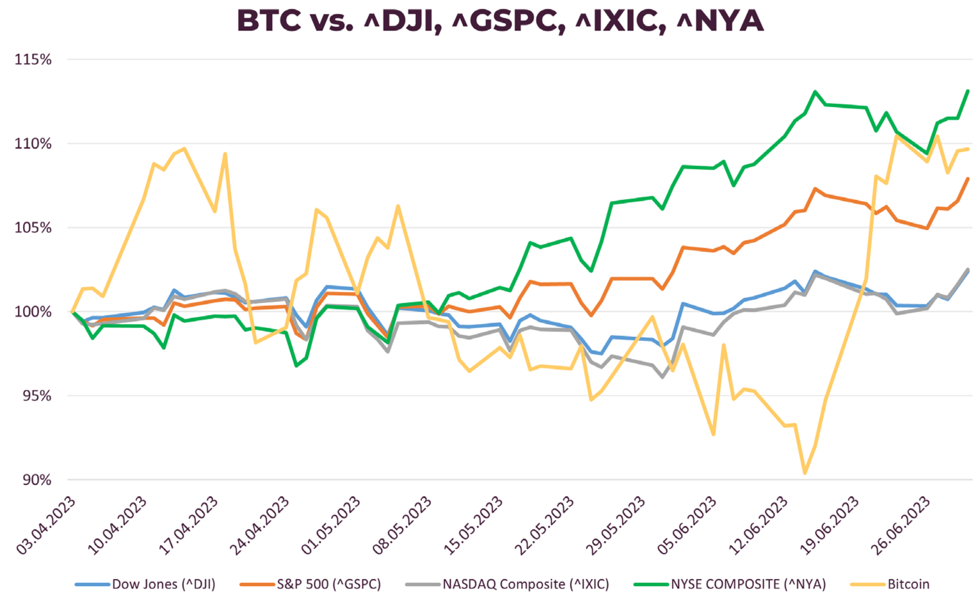
The **DAX (^GDAXI)** is an index of the Frankfurt Stock Exchange that tracks the 40 most important German companies. It ranks them according to market capitalisation and trading volume.

The **Financial Times Stock Exchange 100 Index (^FTSE)** reflects the 100 companies listed on the London Stock Exchange. The only criterion for the weighting of individual stocks is market capitalisation.

## Performance in Q2 2023

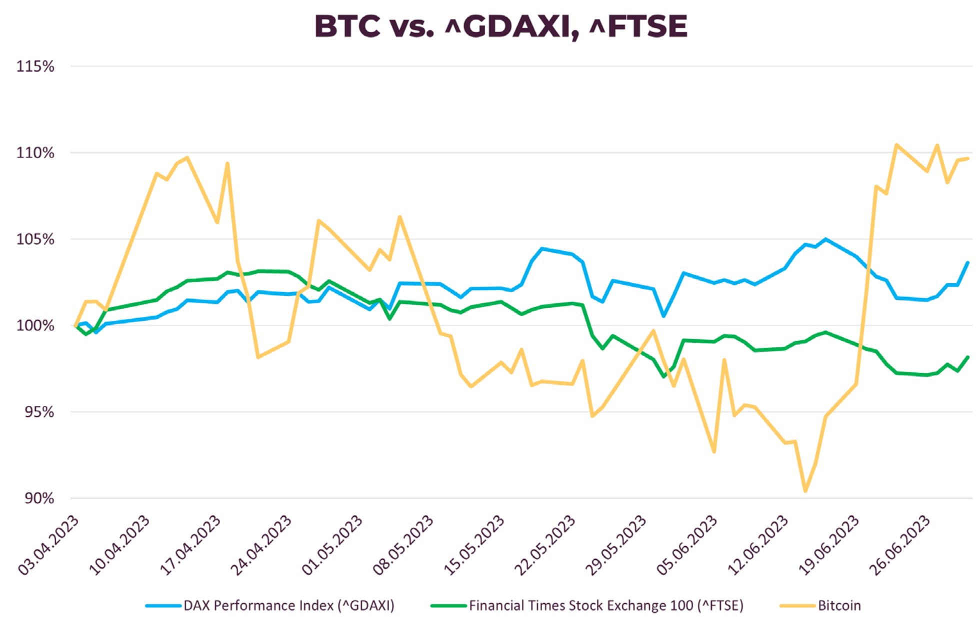
**Bitcoin's** performance in the second quarter was **comparable to the US indices**. The **main cryptocurrency gained 10%**. **US stock indices**, with the exception of the NYSE Composite, **underperformed**. Despite the economic crisis that has been talked about for the past few years, they managed to **maintain their upward trend**. The surprisingly strong state of the US economy is also helping bitcoin. In addition, the market seems to have stabilised after last year's scandals.

**Inflation** has been **falling faster than expected**, which has kept the **market optimistic**. Companies in the **IT sector**, especially semiconductor manufacturers, **performed well**. Of the four indices tracked, the **NYSE Composite** was the best performer, **up 13%**, while the **S&P 500 Index rose 8%**. The **Nasdaq Composite** and the **Dow Jones Industrial Average underperformed**, also **rising** but only by around **2.5%** compared to the others.



Germany's **DAX index rose 10%**, continuing the **positive trend** of the previous two quarters.

The **UK's FTSE 100 fell by 2%**, reflecting the **problems facing the UK economy** as a whole. **Inflation** is still running at **7.9%**, well **above the 5.5% in the eurozone** and the **3% in the US**. **Energy and communications stocks**, which are heavily weighted in the more **conservative FTSE**, generally **underperformed** in the second quarter.



# Comparison of bitcoin with the bond market

## About the metric

For comparison, we have used the **S&P US Treasury Bond Index**. This index attempts to replicate the **overall state of the US bond market**. The value of its constituents reflects their overall performance.

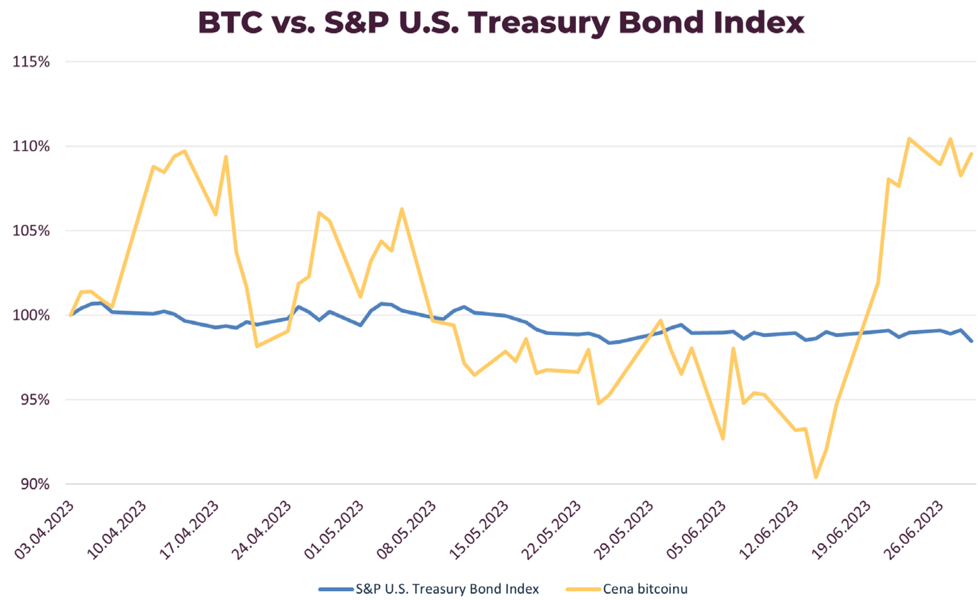
We measure the performance of US Treasuries, which are US government bonds. They are divided into 3 types according to their maturity and the way they pay interest:

- **US Treasury Bills** - 4, 8, 13, 26 and 52 weeks,
- **US Treasury Note -** 2, 3, 5, 7, 10 years, interest paid semiannually,
- **US Treasury Bond -** 30 years, interest paid semi-annually.

Government **bond yield**s are the **result of interest rates** set by the US Federal Reserve on the one hand and inflation, which erodes their value, on the other.

## Performance in Q2 2023

The **S&P US Treasury Bond Index** shows that the **yield on US government bonds has fallen** by an average of **1.3%**. This shows that **as inflation falls**, **government bonds** become **less attractive**. Falling inflation also offers hope that high interest rates will be lowered, making **long-term bonds less attractive**. A situation in which short-term bonds offer higher yields than long-term bonds is usually  is usually a **precursor to an economic recession**.

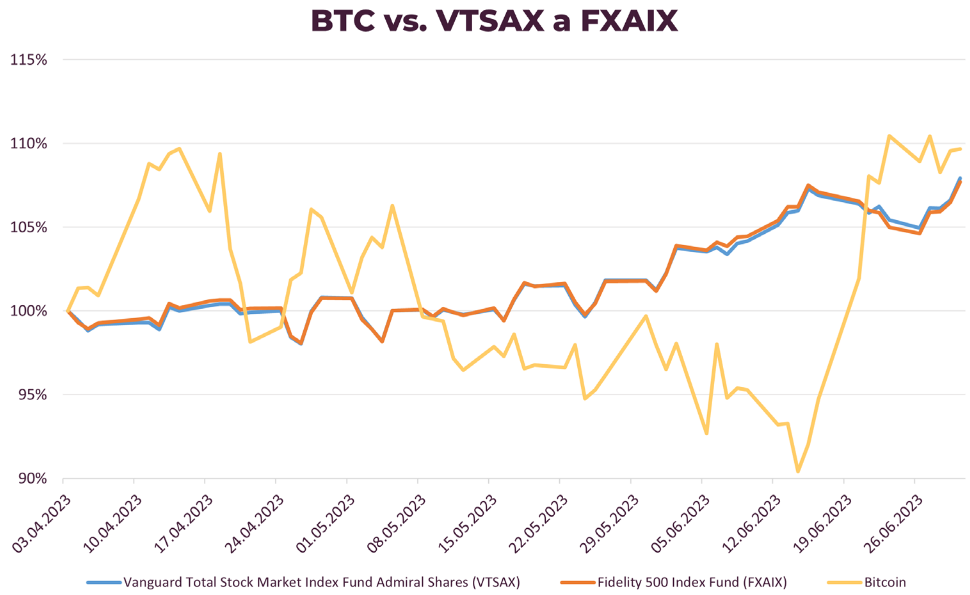


# Comparison of bitcoin with the largest mutual funds

## About the metric

**Mutual funds** are **actively managed** compared to index funds and ETFs (Exchange Traded Funds) and therefore **have higher operating costs**. In addition to management fees, the **client must pay fees** when buying and selling assets. However, precisely because their portfolios are actively managed, **mutual funds should outperform both market indices** and their corresponding index funds. Despite the higher costs, the client should have higher returns.

We chose the **Vanguard Total Stock Market Index Fund Admiral Shares (VTSAX)** and the **Fidelity 500 Index Fund (FXAIX)** because they are the **largest**. Vanguard and Fidelity are the companies that dominate mutual funds. All of the 5 largest mutual funds are managed by them.




## Performance in Q2 2023

**Vanguard Total Stock Market Index Fund Admiral Shares (VTSAX)** had **$1.4 trillion** in assets under management (**AuM**) as of 30 June 2023. This amount was spread across **3,861 different stocks**.The largest market capitalisation stocks were technology companies: Apple, Microsoft, Amazon NVDIA and Alphabet.

**The Fidelity 500 Index Fund (FXAIX)** had net trading assets of **$416 billion** as at 30 June. Similar to VTSAX, the largest holdings in its portfolio are stocks of the largest US technology companies, in the same order.

Over the period, the value of holdings in both **VTSAX and FXAIX increased by around 8%**. As these are actively managed funds, they should outperform index funds. And because they are US funds, we compare them to US equity indices. The **mutual funds performed worse than the NYSE Composite, similar to the S&P 500** and significantly **better than the Dow Jones and Nasdaq Composites**.

# Comparison of bitcoin with gold

## About the metric

Bitcoin has been called **digital gold**, and indeed there are many **parallels between it and physical gold**.  When we compare bitcoin to gold, we are treating it as a **commodity**.

**Gold** has historically been seen as a **store of value** and a **safe haven investment**, a type of asset that should **protect investors from market fluctuations**.Gold tends to have an **inverse relationship** with the **broader market**. Bitcoin, as seen in the correlation chapter, will lost its reserve in the beginning of 2022, when it started to be closely linked to US equity markets. This correlation became looser once again in 2023.

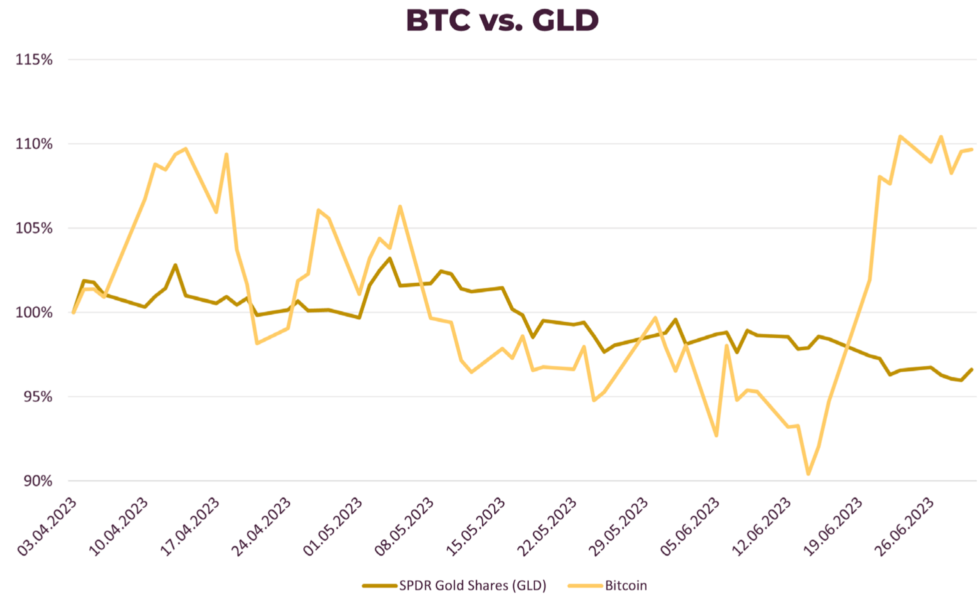
**Bitcoin and gold** are both in **limited supply** and **increasingly expensive to mine**, which should lead to greater scarcity and higher prices.

The **SPDR Gold Shares ETF (GLD)** is the world's **largest exchange traded fund (ETF) backed by physical gold**. It allows clients to invest in gold without owning it. Unlike mutual funds, the ETF is passively managed, simply following the price of the asset to which it is linked without intervention.

## Performance in Q2 2023

As **equity markets outperformed** and almost all earnings reports were better than expected, **gold did not do so well**. The rise in its price, which began in November 2022, began to **stall around the time that US inflation fell below 5%.**

The **price of EFT GLD** shares is **down 3%**. If there are signs of another recession, gold will rise again.



# Correlation with selected investment vehicles

## About the metric

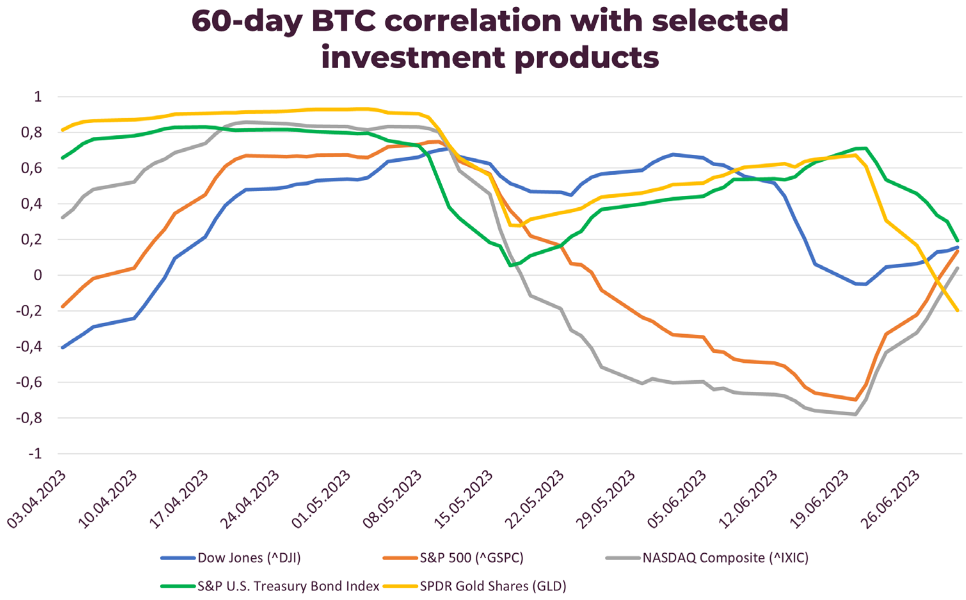
The **60-day correlation** shows the correlation between **2 variables over the last 2 months** before the date on which the value is reported. It tells us whether a **change in the value of one is related to a change in the value of the other**. A high correlation does not necessarily mean that the variables are related, just that they are rising or falling for the same external reasons.

## Correlation in Q2 2023

It is symptomatic of a **period of consolidation** that **bitcoin is not systematically correlated with any asset type**. In the case of **equity indices**, it has a most **similar long-term trajectory** with the **Nasdaq Composite**. This was still the case in April, after which the **correlation changed to negative 0.8**. The **variance** of bitcoin's correlation with the Nasdaq Composite **reached 1.6**, covering **80% of the range**. **US Treasury bonds** had the most **stable relationship with bitcoin** over the period, correlating positively with bitcoin throughout.

The chart shows a **significant drop in correlation with the Nasdaq Composite** and the **S&P 500** at a time when these indices **started to perform strongly** due to **falling inflation**. At the same time, however, **gold stopped performing well and its correlation with bitcoin increased**.

The right side of the chart shows **another trend reversal**, this time in the form of a spike in the price of bitcoin thanks to **BlackRock's ETF application**.

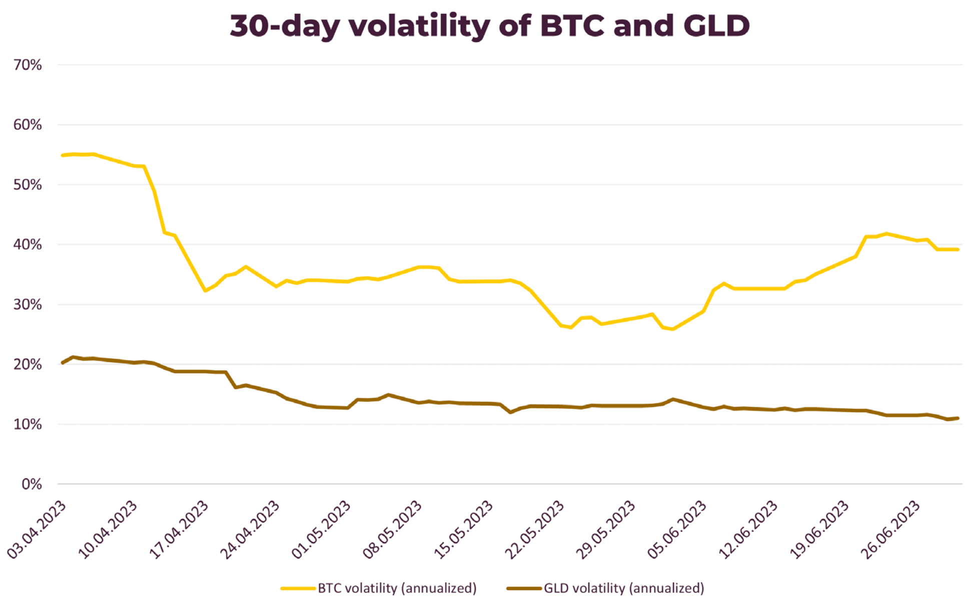


# Bitcoin volatility compared to gold volatility

## About the metric

As Warren Buffett said, "Volatility does not measure risk". **Volatility measures the price fluctuations** of the asset being tracked. So it tells us nothing about whether the trend is up or down. But it does tell us how complicated the journey has become from point A to point B. We look at **volatility over the last 30 days**.

This metric is particularly **important for traders**, and even more so for those who create **market neutral strategies**, i.e. combining **long and short positions** on the same asset.




## Volatility in Q2 2023

Bitcoin's **30-day volatility fell by as much as 26% in February**. While the low volatility at the turn of the year was largely due to its **dependence on the US economy**, this time it is **associated with low trading volumes** and a general doldrums after the end of the bear market and before the start of the bull market.

**Gold** usually trades **in a range of 15% to 25%**. Its volatility has therefore also been **unusually low, down to 11 %**. The reason is **uncertainty**. Investors are tired of the **ever-looming economic crisis** and yet still perceive it as a threat. As a result, there is **no strong consensus** on whether to bet on the **arrival of the crisis** and buy, or to avert it and not buy.

For **cryptocurrency traders**, especially those focused on derivatives, this is a difficult situation as low volatility means **fewer opportunities to profit**.

# What happened in Q2

## Cryptocurrencies as payments method

### Stablecoins

The **total volume of dollar stablecoins declined** throughout the quarter. The **biggest decline** was seen in the market capitalizoation of **USDC**, while Tether's U**SDT thrived** and increased its market capitalization as well as market share. It was helped in particular by **regulatory uncertainty in the US**.

**Tether** released its **second quarter reserve attestation** results. It managed to achieve a **net profit of $850 million**. Even so, its **reserves** in excess of USDT reserves rose to **$3.3 billion**. Of the **$86.5 billion in total assets**, **$72.5 billion** are **U.S. Treasury bonds**. If this information is correct, the composition of reserves is almost **ready to comply** with potential stablecoin regulation.

After **Paxos stopped issuing the BUSD** stablecoin, **Binance sought a replacement**. It seems to have found it in **TUSD**. Since June 30, it has launched a promotion where it is **extending zero-fee trading** to **all the pairs in which TUSD** it has listed. **Binance wallets** hold around **90% of all TUSD** in existence.

The **SG Forge** crypto division of the **Société Générale** banking group has introduced the **EURCV euro stablecoin** for **institutional clients**. It will be tradable on **Ethereum**. It is intended to be the first such asset that can be traded on a **public blockchain**.

### CBDCs

The **European Central Bank** has published its **third progress report** on its exploration of the **digital euro**. It appears, that the Eurosystem has moved freely from the exploration phase to the **development phase**.

The **digital euro** should have **flat limits on the volume**, from which traders and governments will be exempt. In **cross-border transactions**, the digital euro should be **interoperable** with CBDCs of other economic areas.

## Blockchain ecosystems

### Ethereum

7 months after the **Ethreum blockchain transitioned to the Proof of Stake** blockchain verification system, the **Shapella upgrade** (it's conjunction of 2: Shanghai and Capella) was **implemented**. Its most important component, EIP 4895, enabled **withdrawals of staked ethers**, which was not possible before.

In the staking contract on the blockchain, **18 million ether worth $33 billion** was locked. There was a **concern** that the **price would fall** after the ether withdrawal option was launched, as ethers still locked in the staking contract could be sold on the exchange. The **price increased before implementation** and **fell to its original level** a few days **after implementation**.

There are several reasons why the **price held**: 1) **withdrawals were limited** by pre-defined limits, 2) **half of the staking parties were at loss** and thus had no reason to sell, 3) **staking proceeds** are an attractive **source of income**.

The **most prominent entity** that has embarked on withdrawals is the **Kraken exchange**. It has decided to **withdraw 551,000 ETH** for a total of **$1 billion**. The reason is that due to **SEC enforcement action**, it has to withdraw all ETH deposited **on behalf of US clients**. Kraken had a total of 1.25 million Ether staked on Ethereum.

The popularity of **liquid staking** protocols such as **Lido DAO**, Rocket Pool and Frax Ether has **increased significantly**. Liquid staking allows you to participate in node authentication without having to manage your own node.

### Ethereum Layer-2s

The adoption of Shapella's upgrade dealt a major **blow to Ethereum's competitors** such as Solana, Cardano and Polkadot, which wanted to compete with it mainly by being able to process significantly **higher number of transactions**.

Further improvements should lead to Ethereum being able to handle a higher number of transactions per second in the future. Currently, it's around 12. But this will always go hand in hand with **second-layer blockchains** that process their own transactions and then **record them on main Ethereum blcokcain in larger bundles**.

Their rapid development can be expected in the coming months.

**Polygon** has launched its long-awaited **second-layer blockchain**, which uses **zero-knowledge (ZK) rollup** technology. According to Vitalik Buterin, this is also a technological solution that belongs to the future.

The **Skale Network** of sidechains has introduced the Levitation Protocol, bringing the **ZK Rollups** technology here.

### Avalanche

Despite the crypto winter, the **user base of the Avalanche blockchain is growing** steadily. For the first time ever, the number of **active users exceeded 1 million** in a month. The main reason for this is the recent launch of AvaCloud, a platform for creating custom sub-networks, second-layer blockchains on top of Avalanche that developers can customize at will.

### Sui

On Wednesday, May 3, the **main Sui blockchain network was launched**. Its **native token SUI**, began selling on exchanges such as OKX, Bybit and Kucoin. Binance has also added it to its launchpool.

Sui wants to **compete with blockchains** that are able to **process a large number of transactions** in a small amount of time like Solana, Aptos and Sei. The network has more than 2,100 validators in 43 countries. It is managed by **Mysten Labs**, founded by **former Meta employees**, as is Aptos. They also share the Move programming language developed by the Diem project.

## CryptoFi

### Binance

The **Binance exchange** has announced that it will **exit the Canadian market**. The main reason for this is that **new regulations** came out in February that **prohibit crypto exchanges** clients from being able to **purchase stablecoins without prior permission** from the Canadian Securities Administrators (CSA). In order to obtain a **full license**, an exchange must go through a **registration process**. **Bybit** and **OKX** exchanges have **also left the Canadian market** for the same reasons. This should help exchanges that compliant with regulation. **Kraken**, for example, has seen a **25% increase in deposits in Canada** following the announcement of these exits.

**Binance** will also **exit Cyprus and the Netherlands**. This is reportedly because they want to **focus on larger markets in the EU** and **prepare for MiCA**. Then they will **be able to operate in all EU countries** thanks to 1 license in any member state.

This is made difficult by **investigation in France**, where the **exchange is suspected of money laundering**. Since last year, Binance has also been registered in the country as a digital asset service provider and theit **EU headquarters** is based here.

## Coinbase

Due to **pressure from regulators in the United States**, Coinbase is looking for **sources of revenue other than fees** from trading on their main exchange in the US. They recently **had to cancel their bitcoin-backed lending program** because they were threatened with legal action from offering unregistered securities.

Thanks to a **license from the Bermuda** financial regulator, they **opened a derivatives exchange** outside the US called **Coinbase International Exchange**. It is targeted at international customers, with **US citizens explicitly prohibited** from trading here. They are also negotiating **registration in Abu Dhabi**.

The firm is also **expanding its subscription service to the UK, Ireland and Germany**, with clients getting zero trading fees for a monthly payment of $29.99. It is soon to expand to **31 other European countries**.

It is also **expanding** its **offering in Singapore**. It will now be possible to **buy USDC for Singapore dollars**. The number of **USDC trading pairs** will expand to **200**. It is also introducing ETH, SOL, ADA, ATOM and XTZ staking.

**Coinbase Institutional** launched in early May, focusing on trading with **regulated commodities**. It is **fully regulated by the CFTC** and, as the name suggests, offers services only to financial institutions. Since June, r**egulated derivatives of bitcoin and ether** have been traded on it.

The publication of **Q1 financial report** also brought **optimism**. **Revenue rose** by **22%** to $736 million, thanks to cost cutting. **Income from interest** increased significantly, up **32%** to $246 million. Of this, **$199 million** was in interest income from **USDC** alone. However, this is expected to **deteriorate** in the **next quarter** due to the **declining** market capitalization of **USDC**. In positive news, there was also the first **quarter-on-quarter increase** in **trading volume** since the **end of 2021**, the start of the crypto winter.

## FTX

FTX **insolvency proceedings continue**. It is coming to light how it operated under **Sam Bankman-Fried**. The **new management** is trying to **find as much money as possible** to pay off clients. But it is not easy, because the exchange was said to be in such a state that it would definitely **not be able to pass an audit**, and the former management members themselves had no knowledge of the firm's balance sheet, transaction history or positions currently open. The **former CEO** often **transferred tens of millions of dollars into his own account**. The chaos was also in cybersecurity. **Passwords to crypto wallets** were often **not secure** and were **freely available** on a company shared drive.

The U.S. **tax authority IRS** has asked the **FTX bankruptcy estate** to **pay $44 billion in taxes**. This is a strangely high number considering that **all the assets** found are currently **worth only $7.3 billion**. The IRS is asking for **$20 billion** in so-called **"partnership tax"** alone, which is a type of income tax that is derived from the **profits of the owners** of the company. $8 billion of this was supposed to be in 2022 alone, a higher number than their sales and $12 billion for 2023, when FTX was insolvent. The claim was filed as so-called **Admin Priority**, which should mean the IRS **gets its money before other creditors**. The implication is that they would get nothing. But the IRS demand seems excessive and is probably largely a **negotiating strategy**.

Sam **Bankman-Fried's lawyers** are trying to find any **way out**. They've tried to have some of the **charges dismissed** because they were **duplicitous**. They were generally **unsuccessful**. But they were **successful on the point** where they argued that the charge of **violating laws related to political donations** was **not part of the agreement** under which he was **extradited from the Bahamas** to the US.

Advocates are trying to portray the way **business was done at FTX and Alameda Research** as **standard** within the **crypto industry**. They say the **blame lies** mainly **with the U.S. government**, which has been **unable to clarify regulations** in this area. They also claim that the main cause of the exchange's collapse was the **crypto winter**, not the collapse of the FTT token or the secret crypto flows between FTX and Alameda Research.

The **trial will begin in October** and will hear **eight counts of the indictment**. The **other 5 charges**, which were added after the fact, will be part of a **separate trial**. It is pending whether the Bahamas attorneys will give permission. The second trial was eventually scheduled to begin in March 2024.

# Regulation

## EU

The **European Parliament** finally **approved the pan-European MiCA regulation** by 517 votes to 38. MiCA is the **most comprehensive crypto regulation to be approved globally** to date. MiCA sets out the **rules** under which **crypto financial services intermediaries** and **token issuers can register** and operate, how they must **disclose information** about their activities, and the **rules for supervision**.

In the event that a **crypto platform threatens market stability** or fails to adequately protect investors, it may be **shut down** by the **securities regulator ESMA**.

**Stablecoin issuers** will need to **hold significant reserves** in case of a run. They will also be subject to a **transaction volume limit of €200 million** per day. Firms will have to **disclose their energy consumption** and the environmental impact of the digital assets they offer.

By a 529 to 29 vote, the **European Parliament** also **approved** additional **Transfer of Funds legislation** that limits the anonymity associated with cryptocurrency trading. This means the **introduction of** the so-called **travel rule**. **Transactions over €1,000 involving** by an unidentified crypto wallet will need to be **reported to regulators**.

The **European Parliament** has also **adopted** a law to **prevent money laundering**. It will now be the subject of a **trialogue** with the **European Commission** and the **European Council**. The most significant change for crypto is that **DAOs, NFTs and DeFi platforms** should be **subject to anti-money laundering laws** just like any other type of financial institution. However, this will only apply if they are demonstrably controlled by individuals or legal entities.

## Hong Kong

Hong Kong's **securities regulator issued guidelines** for the **licensing regime of crypto exchanges** in May. This is part of an initiative they came up with in February to strike a better balance between investor protection and market opportunities. On May 25, the **registration regulations and rules against money laundering and terrorist financing were published**. Applications could be submitted from 1 June 2023, and retail trading of certain crypto assets will begin on 1 July.

Regulators in Hong Kong are also **encouraging banks to work with crypto firms**. The Hong Kong Monetary Authority, Hong Kong's top financial regulator, said regulated virtual assets service providers should be able to obtain a bank account. In the US, regulators are trying to prevent this.

The **Huobi** exchange **established a subsidiary**, **Huobi HK**, which was one of the first to apply to become a **regulated crypto exchange**. As a result, it was able to **start offering spot trading to both retail and institutions**.

San Francisco-based **VC firm Blockchain Capital** has announced that it is considering moving its headquarters to Hong Kong due to regulatory uncertainty in the US.

## China

The new **regulation in Hong Kong** is an **indicator that China's attitude towards cryptocurrencies is changing**. **China** itself has **published a whitepaper** for the **development of web3** in the country. **Beijing** is set to become a **global innovation hub** for the digital economy. In the Chaoyang district, ¥100 million ($14 million) a year will be invested in the next 3 years to achieve this goal.

## UAE

The **Central Bank** in the United Arab Emirates has published **anti-money laundering and anti terrorist financing regulations** for regulated financial institutions that do business in the crypto sector. They are **based on the FATF recommendations**. This is part of an effort to **attract companies operating in the crypto sector** to the country.

**Bitterfly s.r.o., 2023**

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