BITFINEX Alpha

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EXECUTIVE SUMMARY

So far this year, Bitcoin and Ether, have demonstrated remarkable resilience and growth, significantly outpacing traditional investments. When benchmarked against gold, BTC and ETH, appreciated by 93 percent and 39 percent respectively. The performance correlation between BTC and Ether has also been notably tight throughout the year. However, during upward trends, BTC has outperformed, attributed to its first mover advantage as a crypto asset, its perceived 'digital gold' status, and broader institutional adoption. Interestingly, while BTC and commodities like gold have reached significant highs, major indices like the S&P 500 and NASDAQ are still in a correction phase. This divergence suggests a potential shift in market dynamics, with crypto poised to continue outperforming traditional markets.

The BTC price is up now by over 110 percent since the beginning of the year, with the average duration holder transitioning from unrealised loss to profit. Historical patterns suggest that significant price surges often lead to consolidation or sharp retractions, especially with the influx of novice investors. However, the declining Coin Days Destroyed metric indicates that long-term holders are holding firm, underscoring their belief in Bitcoin's long-term value. Furthermore, wallets holding large amounts of BTC are showing inactivity, suggesting a bullish sentiment or hedging against future uncertainties.

The resilience of crypto assets this year also reflects a Federal Reserve that is keeping the reins of the economy tight - but is not tightening further. In a widely anticipated move, the Fed kept benchmark interest rates steady between 5.25 and 5.50 percent, while upgrading its outlook on the US economy, signalling increased confidence.

Despite this optimistic stance, the American manufacturing sector still saw activity decline in October. The downturn is largely attributed to strikes at key automobile manufacturers, suggesting that labour disputes are having a more substantial impact than previously recognised.

The ripples of the manufacturing sector's struggles were felt in the broader economy, as job growth across the United States lost momentum. Wages also increased at their most modest rate since mid-2021 over the past year, hinting at a possible shift in labour market dynamics.

In the latest news from the crypto-sphere, Sam Bankman-Fried has been convicted on charges including wire fraud and money laundering after FTX's dramatic downfall. This development followed incriminating testimonies from key insiders.

Meanwhile, PayPal's foray into the stablecoin space with PYUSD has hit a snag, with the SEC issuing subpoenas on the company, signalling continued scrutiny faced on crypto entities in the US.

More positively, the National Bank of Georgia is exploring a partnership with Ripple to pilot a digital Georgian lari. The project underscores Georgia's commitment to integrating blockchain technology into its financial systems, amidst a global uptick in CBDC exploration.

Happy Trading!

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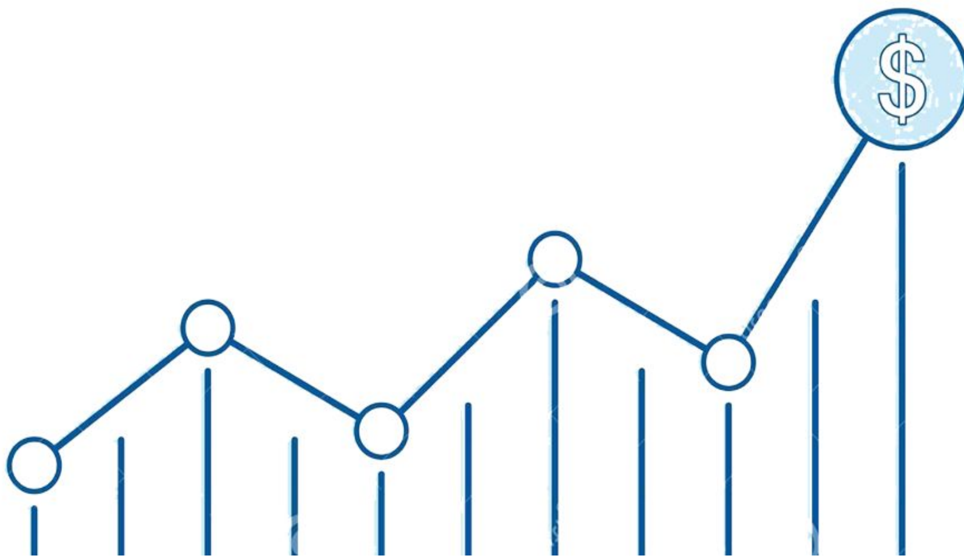


WHAT'S ON-CHAIN THIS WEEK?

Relative Outperformance in Crypto

Throughout 2023, crypto assets have showcased an impressive run, notably outstripping traditional investments both in terms of growth and resilience. Both Bitcoin and Ethereum have emerged as star performers, registering significant gains and experiencing relatively fewer dips compared to their past performances in other market cycles.

The figure below, which tracks the performance of BTC and ETH relative to gold, offers a compelling glimpse into their robust health. When expressed in gold terms, a traditional benchmark for store of value, BTC's appreciation stands at a staggering +93 percent for the year, whereas ETH has posted gains of 39 percent.

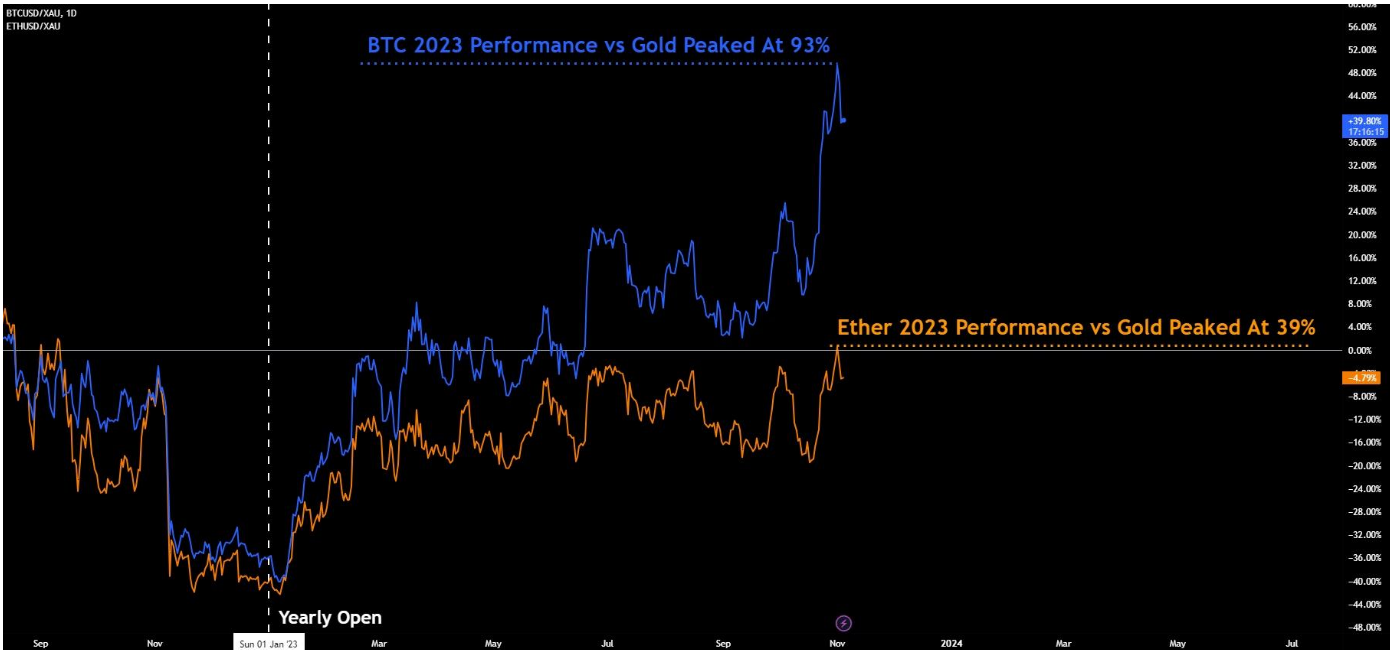


Figure 1. BTC/XAU vs ETH/XAU Daily Chart

This outperformance is all the more remarkable given the prevailing global economic climate, marred by uncertainty on several fronts. Amid such tumultuous conditions, the stalwart performance of these cryptocurrencies could very well be turning heads in conventional investment circles. Throughout the duration of 2023, a close examination reveals a tight-knit performance correlation between BTC and Ether on a rolling 30-day basis.

Figure 2. BTC and Ether Relative Performance vs Gold on a Year-To-Date basis Rolling 30-day change. (source: glassnode)

Though both assets have shown a synchronised trajectory in their movements, their amplitudes during these phases have been distinct. The downswings witnessed by both BTC and ETH have been of a comparable magnitude, however, during periods of upward trajectory, Bitcoin has demonstrated a more pronounced surge. The stronger performance of BTC during these upswing phases can be attributed to various factors, such as its established reputation as the pioneer cryptocurrency, its perceived digital gold status, the ETF approval frenzy and its broader institutional adoption.

As BTC reached its high for the year last week, gold and several other commodities also approached significant highs. However, the S&P 500 and the NASDAQ composite, are still regarded as being in a correction phase. Since September 2023, there has been a significant decorrelation with US stocks and even with the NASDAQ, with its tech heavy index, and which BTC has historically been highly correlated with. Gold and several other commodities have played catch up over the past couple of months with the correlation index reaching up to 0.8 on a scale between -1 and 1.

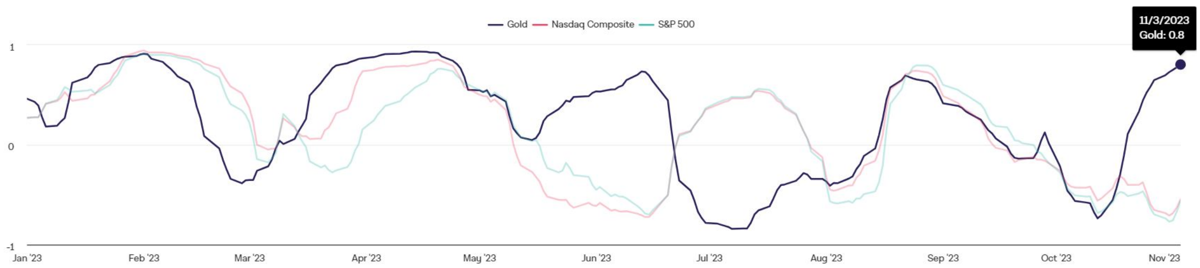


Figure 3. BTC Pearson Correlation Against Gold, SPX and NASDAQ. (source: The Block)

This relative outperformance for crypto adds credence to a future scenario where crypto continues to outperform traditional markets, perhaps at a more rapid pace.

Decreasing Supply Side Liquidity

BTC has risen by over 110 percent since the start of the year. Crossing the pivotal $19,700 mark in mid-January underscored a shift in market sentiment, with the average Bitcoin holder moving from a position of unrealized loss to profit. This is demonstrated by the actual BTC price moving past the realised price for the average holder. This transition has played a fundamental role in solidifying the confidence of market participants.

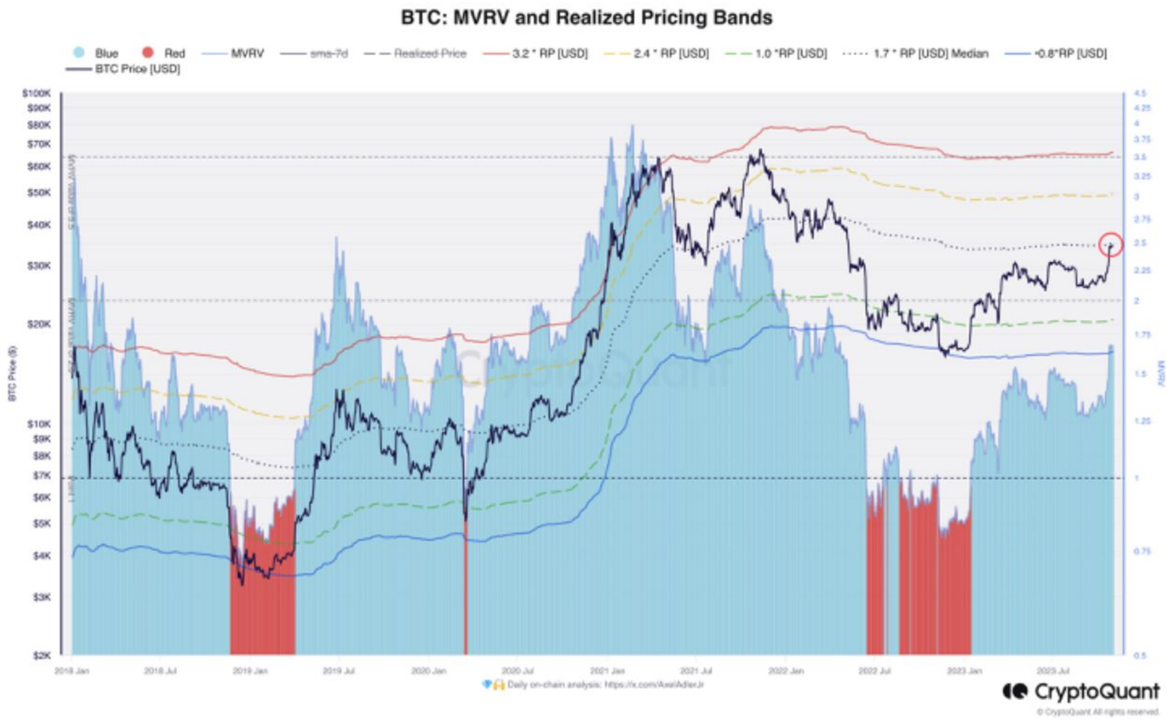


Figure 4. MVRV and Realised Pricing Pricing Bands. (source: CryptoQuant)

The speculation surrounding the approval of a Spot ETF by the SEC has been a notable driving force in the recent market surge. The journey from $26,900 to the current price suggests that the market is heavily pricing in an anticipated positive decision. Using the Realised Pricing Bands model, Bitcoin currently sits comfortably in the middle zone. Realised Pricing Bands are dynamic price levels which are a multiple of the realised price for BTC based on statistical theory, and includes but is not limited to median and standard deviations.A move into our next “yellow zone” currently coincides with the $50,000 mark.

However, history has shown us that with significant price surges come periods of consolidation and, at times, sharp retractions. The entrance of novice investors, spurred by FOMO (Fear of Missing Out), tends to lead to an initial spike in buying activity. Yet, as the futures market exerts its influence and a correction ensues, these newcomers often find themselves selling at a loss. This cycle creates a rich environment for seasoned investors, who can capitalise on these market dynamics.

In each cycle there is an oscillation of price between different realised price bands. Should these patterns persist, it's plausible to foresee a future where Bitcoin's price pushes to align with a Market Capitalisation to Realised Capitalisation ratio (MVRV)of 3.5, placing Bitcoin in the red zone of the Realised Pricing Bands. Currently this zone coincides with the $75,000 and above region. Should this price increase in a gradual manner, or even range at current levels while the lagging realised price catches up to actual price, this would push this red zone above $100,000 to $120,000. Historically, entering the red zone has indicated that the market is overheated, often preceding notable price corrections.

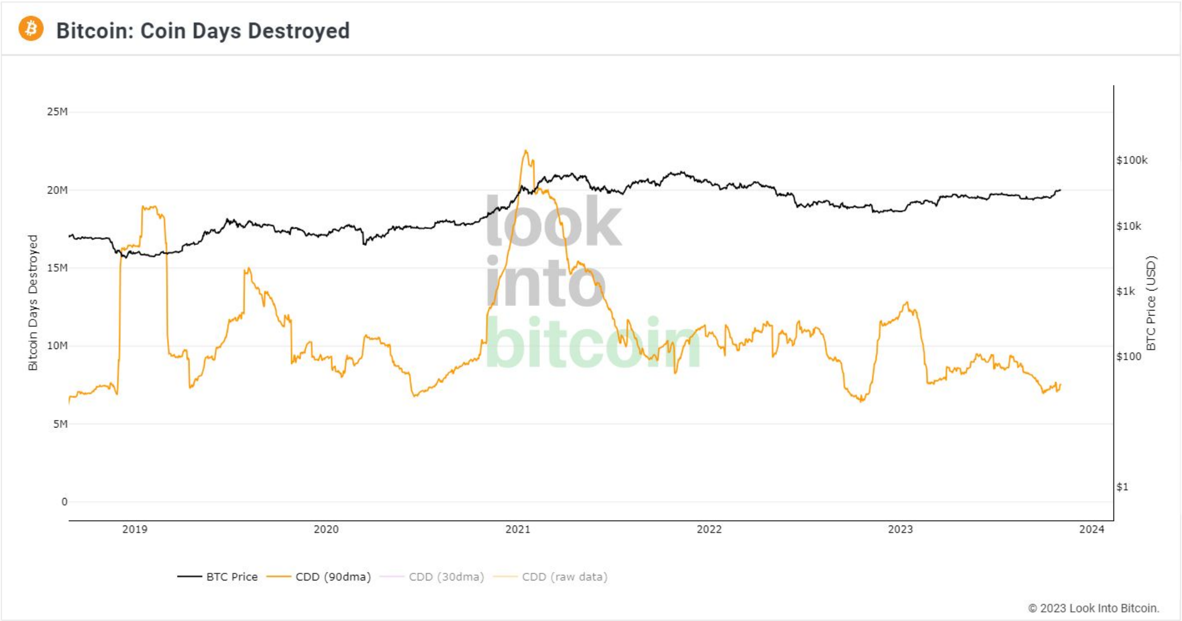


Figure 5. Bitcoin Coin Days Destroyed. (source: lookintobitcoin)

Coin Days Destroyed (CDD) is a measure of economic activity in the Bitcoin network. It seeks to provide a more nuanced view than simply looking at transaction volume alone. The declining Coin Days Destroyed metric offers a unique perspective on the current market conditions. Despite the flurry of excitement surrounding the asset, long-term holders (LTHs) are yet to capitulate. This strong hold mentality underpins a deep-seated belief in Bitcoin's value proposition and future potential. In essence, this suggests that even the current rally may not be enough to tempt the longest-standing believers to part with their holdings. Such conviction is indicative of the underlying strength and resilience of the Bitcoin market.

Further confluence to our thesis of the current market having low sell-side liquidity is reflected in a lack of selling from wallets corresponding to large Bitcoin holders. This implies they believe that there might be more upside potential or are content with holding their position for longer. Wallets holding 1,000-10,000 BTC are now largely inactive as shown by the Spent Output Value Bands (SOVB) metric trending lower; indicating a potential stabilisation or even bullish sentiment. Their inactivity suggests they are not eager to offload their BTC, which can mean they either foresee further potential for growth or are simply hedging against potential future economic uncertainties. (refer Figure below)

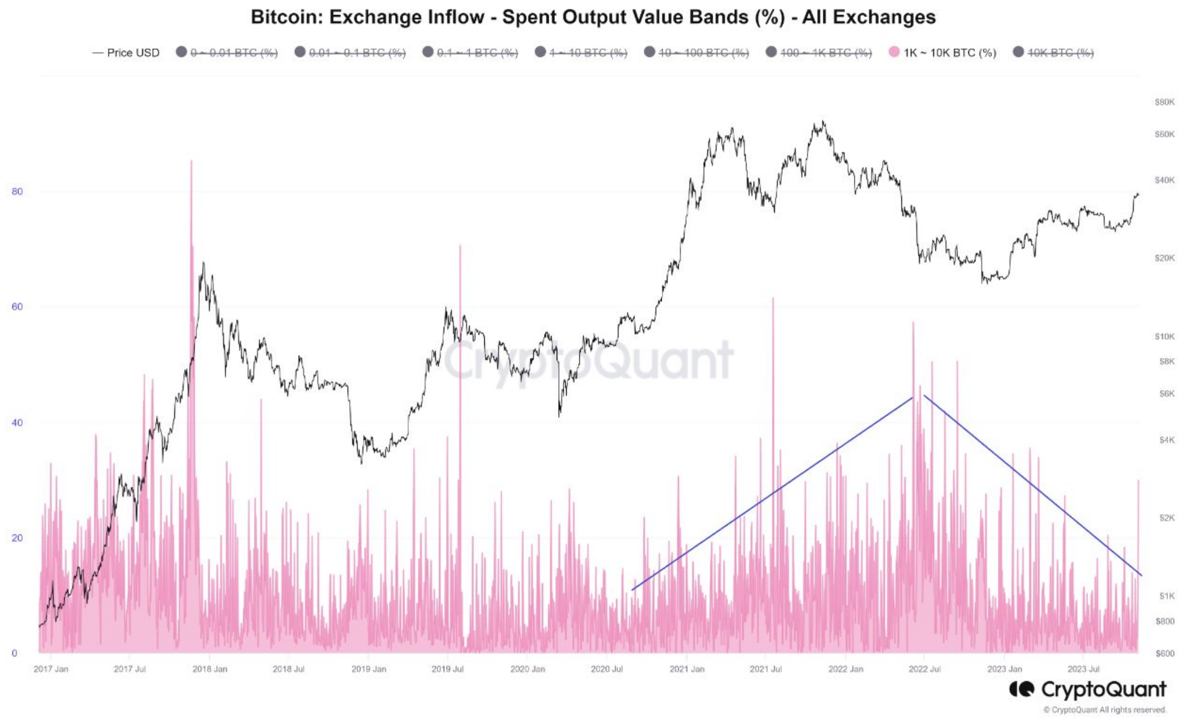


Figure 6. Spent Output Value Bands in Percentage Of Supply Terms. (source: CryptoQuant)

Meanwhile, entities with lower Bitcoin balance in the 10-100 BTC range have increased spikes in the SOVB metric. Which means that smaller holders are likely the ones exerting selling pressure right now. However, over the past few weeks this continuous selling pressure has proven to be relatively weak and this behaviour from these cohorts of holders usually correlates with the early stage bull markets.

GENERAL MARKET UPDATE

Federal Reserve Holds Interest Rates Steady Amid Economic Strength and Financial Tightening

Figure 7. Fed Chair Jerome Powell during the November 1st FOMC meeting (Source: Federal Reserve)

As per market expectations, the Federal Reserve decided to maintain its benchmark interest rate within the 5.25 - 5.50 percent range following a two-day meeting. While this decision wasn't surprising, the central bank's accompanying policy statement revealed an upgraded outlook for the US economy.

The Policy Statement

The Federal Reserve acknowledged the "strong" pace of economic growth in the third quarter, a step up from the "solid pace" it previously referred to at its September meeting. This shift in language reflected data showing a remarkable 4.9 percent annual growth rate in US gross domestic product during the third quarter.

The Fed retained its stance on inflation and extended it to the language it previously used in discussions about inflation remaining elevated, stating: "In determining the extent of additional policy firming that may be appropriate to return inflation to two percent over time, the Committee will take into account the cumulative tightening of monetary policy, the lags with which monetary policy affects economic activity and inflation, and economic and financial developments."

Market Reaction

Financial markets reacted positively to the announcement, with US stocks experiencing gains and the US dollar losing some ground against other currencies. Meanwhile, US Treasury yields decreased, and 30-Day Fed Funds futures pricing data indicated that the Fed may not raise rates further and might even consider rate cuts by June of the next year.

Figure 8. US Stocks: S&P 500, Dow Jones Industrial Average, NASDAQ 100 (Source: TradingView)

CME FEDWATCH TOOL - MEETING PROBABILITIES										
MEETING DATE	350-375	375-400	400-425	425-450	450-475	475-500	500-525	525-550	550-575	575-600
12/13/2023			0.0%	0.0%	0.0%	0.0%	0.0%	80.4%	19.6%	0.0%
1/31/2024	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	70.4%	27.2%	2.4%
3/20/2024	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.7%	62.6%	22.7%	2.0%
5/1/2024	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	34.4%	45.3%	13.7%	1.1%
6/12/2024	0.0%	0.0%	0.0%	0.0%	3.0%	21.3%	40.3%	28.1%	6.8%	0.5%
7/31/2024	0.0%	0.0%	0.0%	1.9%	14.3%	33.1%	32.7%	14.9%	2.9%	0.2%
9/18/2024	0.0%	0.0%	1.1%	9.2%	25.4%	32.9%	22.2%	7.8%	1.3%	0.1%
11/7/2024	0.0%	0.5%	5.0%	17.0%	29.0%	27.8%	15.3%	4.7%	0.7%	0.0%
12/18/2024	0.3%	3.3%	12.4%	24.4%	28.2%	20.0%	8.7%	2.2%	0.3%	0.0%

Figure 9. 30-Day Fed Funds futures pricing data (Source: CME FedWatch Tool)

Press Conference

Concerns have been raised that rising bond yields could be used as a form of monetary tightening, instead of more rate hikes. Federal Reserve Chair Jerome Powell responded in a press conference by saying that yields would have to keep going up in order to affect the central bank's decisions about monetary policy. Powell also recognised that higher Treasury market yields are beginning to affect real-world borrowing costs.

One notable development is the rise in yields on longer-dated Treasury securities by approximately one percentage point since the last rate increase in July. This increase has occurred even though the Federal Reserve has maintained its policy rate unchanged since then.

Powell indicated that if economic growth consistently exceeds expectations or if the labour market remains tight, it might justify further tightening of monetary policy. Just as important, the Federal Reserve does not forecast a recession.

Key Insights

As the Federal Reserve navigates these complex economic dynamics, it faces the challenge of balancing its mandate to control inflation with the need to support continued economic growth. The policy statement issued on Wednesday suggests that officials are taking a cautious approach, considering the lags with which monetary policy affects economic activity and inflation, and economic and financial developments.

At present, the Federal Reserve seems to have no plans to increase interest rates in the short term, although it has not announced that a peak has been reached either. However, we think that the central bank may be done raising rates primarily due to tightening financial conditions, with bond yields rising over the recent months.

The Federal Reserve seems well-prepared to maintain this extended pause, allowing the economy sufficient time to absorb the effects of higher borrowing costs. These elevated costs are already putting a dampener on investment growth and this warrants a careful assessment of recent economic data.

Figure 10. Market Yield on US 10-Year TIPS

Double-digit borrowing rates required for financing payrolls and business investments could lead to a significant economic slowdown. Moreover, with long-run real rates on the rise, reaching up to 2.5 percent using 10-year Treasury Inflation-Protected Securities (TIPS) as a benchmark, the central bank will need to focus on stabilising and ultimately reducing these real rates.

US Manufacturing Sector Faces Decline Amid Auto Workers' Strikes

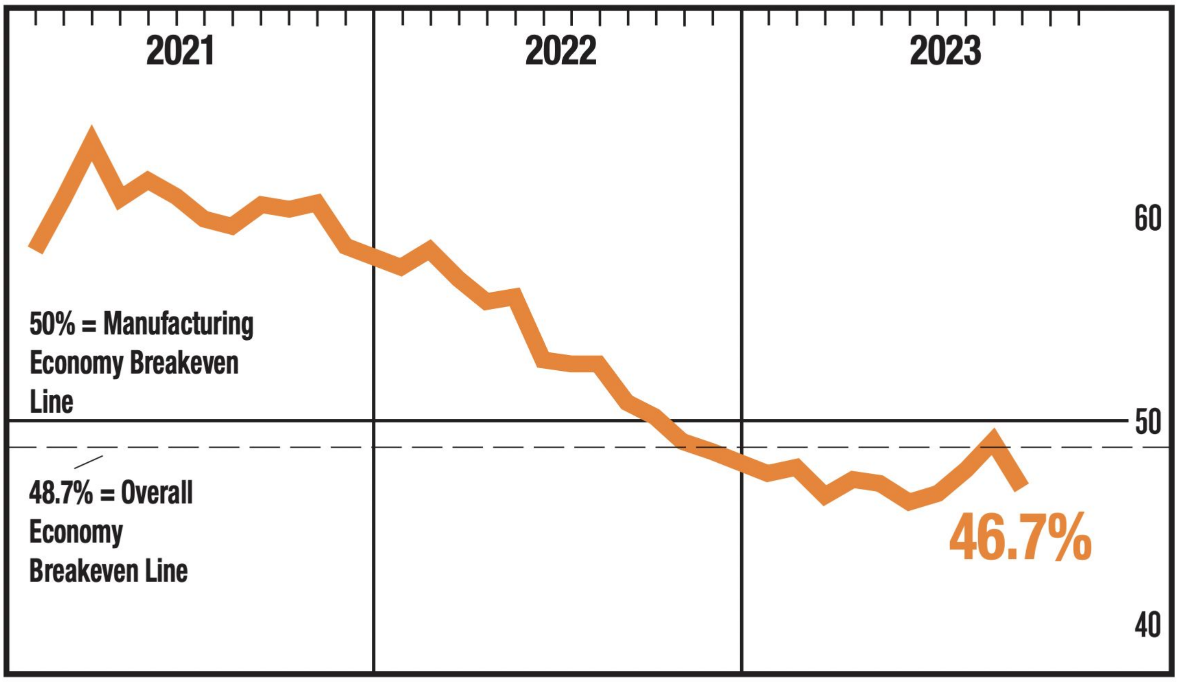


Figure 11. ISM Manufacturing Purchasing Managers' Index (Source: S&P Global)

The American manufacturing landscape faced a downturn in October, reversing a period of hopeful recovery, with activity falling as strikes across major automobile manufacturers took their toll.

The monthly index from the Institute for Supply Management (ISM) reported a decline in the manufacturing Purchasing Managers' Index (PMI) to 46.7 in October, down from September's peak of 49.0, the highest since November last year. This downturn marks a full year of the PMI lingering below the 50-point threshold, signifying a protracted contraction unseen since the 2007-2009 recession period.

The consensus forecast was the index would hold steady at September's level. However, widespread industrial action by United Auto Workers (UAW) significantly impacted operations at factories belonging to industry giants such as Ford Motor, General Motors, and Stellantis, the parent company of Chrysler. The strikes, which unfolded nationwide, disrupted not only production but also the broader supply chain, leading to significant layoffs and furloughs of workers not directly involved in the strikes.

While the unrest in the auto industry weighed heavily on the index, the future may hold some optimism as automakers and the UAW have recently come to tentative labour agreements, potentially setting the stage for a rebound in the PMI for November.

Amid the turmoil, factories reported backlogs remaining steady, albeit at low levels, and that there was a continued trend of inventory depletion, which could potentially translate to a rise in future production needs.

The data presented reflects a sector poised for potential recovery should the labour disputes be resolved and if factories can rebuild their depleted inventories, positioning themselves for increased production in the near term.

US Labour Market Shows Signs of Cooling Amid Auto Sector Strikes and Lower Wage Growth

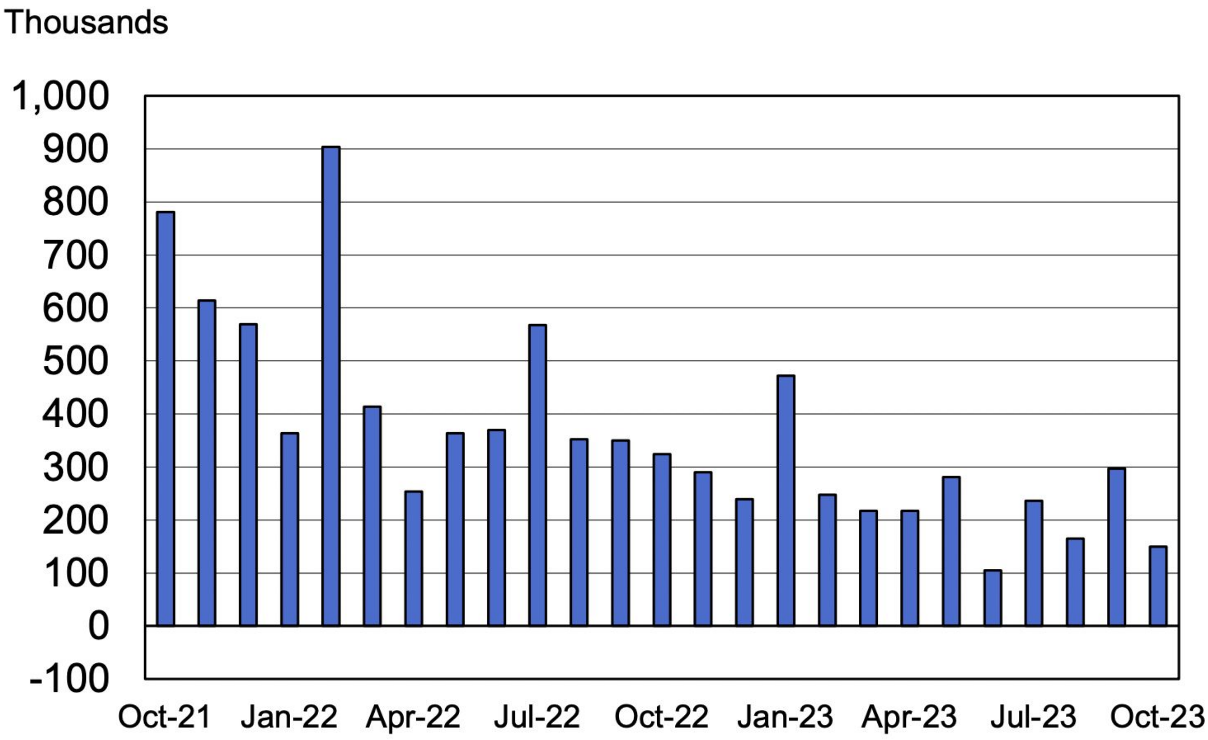


Figure 12. Nonfarm payroll employment over-the-month change, seasonally adjusted, October 2021 – October 2023 (Source: US Department of Labor)

The pace of job growth in the United States decelerated during October, influenced partly by strikes at major automotive manufacturers, while wage increases recorded their smallest annual rise since mid-2021, signalling a potential cooling in what has been tight labour market conditions.

According to the latest employment report from the US Labor Department last Friday, November 3rd, nonfarm payrolls saw an addition of 150,000 jobs in the past month, falling short of the consensus forecast of a 180,000 job increase. Additionally, there have been downward revisions for job figures in September, which showed 297,000 jobs created instead of 336,000.

The unemployment rate edged up slightly to 3.9 percent in October — a level not seen since the beginning of 2022 — despite some individuals withdrawing from the workforce. Strikes at key automotive companies like Ford, General Motors, and Stellantis played a notable role in the manufacturing sector losing 35,000 jobs.

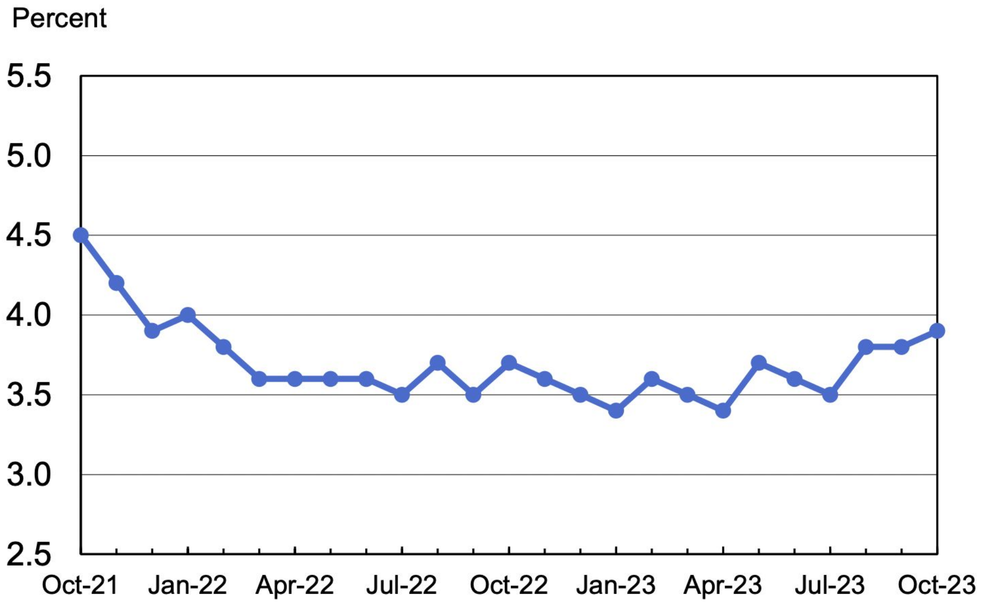


Figure 13. Unemployment rate, seasonally adjusted, October 2021 – October 2023 (Source: US Department of Labor)

Wages, which are a critical indicator of economic stability, rose by a modest 0.2 percent following a 0.3 percent increase the previous month. The annual increase in wages stood at 4.1 percent, which is the least pronounced growth since June 2021, suggesting that wage-driven inflation pressures might be subsiding, supporting our last month's report of a cooling job market.

While some fear that contracts like those recently secured by the UAW and other unions might hinder the Federal Reserve's efforts to combat inflation. However, we think that these contracts would only become an issue for wage inflation if the Fed raised interest rates excessively, thereby suppressing consumer demand.

When hourly wage growth moderates, it can help mitigate inflationary pressures. If productivity is increasing at the same time, it means that workers are becoming more efficient, producing more output per hour worked. In a separate report by the US Labor Department last Thursday, November 2nd, US worker productivity experienced its fastest growth in three years, with a 4.7 percent annualised rate in the third quarter of the year, this is the fastest pace since the third quarter of 2020. A higher economic output without a corresponding increase in labour costs can help keep inflation in check.

The softer job growth and higher productivity reports last week were aligned to the Fed's decision to pause interest rate hikes. The economy's resilience, demonstrated by near five percent annualised growth in the third quarter, seems to be significantly underpinned by the labour market's performance. Even with the cooling of wage increases and job growth, the current trends indicate that the labour market continues to be a cornerstone of the US economy's endurance amid inflationary pressures and policy uncertainties.

NEWS FROM THE CRYPTO-SPHERE

Sam Bankman-Fried Found Guilty in Landmark FTX Fraud Trial

Figure 14. Sam Bankman-Fried (Source: CNN)

- **Sam Bankman-Fried (SBF), founder of FTX, has been found guilty on all seven criminal charges, including wire fraud and money laundering, tied to the collapse of FTX and Alameda Research.**
- **Key testimonies from SBF's former close associates, including his ex-girlfriend and an FTX co-founder, played a significant role in the trial's outcome.**
- **The case, drawing parallels with the trial of Theranos founder Elizabeth Holmes, culminates with a sentencing scheduled for March 28.**

In a solemn conclusion to the FTX saga, Sam Bankman-Fried (SBF), the MIT graduate and FTX founder, has been convicted of all seven criminal charges levelled against him. A jury delivered the guilty verdicts swiftly, marking the end of a high-profile trial that unveiled one of the most significant financial frauds in recent US history.

SBF was accused of wire fraud, conspiracy to commit wire fraud against both FTX customers and Alameda Research lenders, conspiracy to commit securities and commodities fraud against FTX investors, and finally, conspiracy to commit money laundering.

US Attorney for the Southern District of New York, Damian Williams, described the situation as emblematic of timeless corruption. He remarked, “While the cryptocurrency industry might be new... this case has always been about lying, cheating, and stealing.” This sentiment was echoed by Attorney General Merrick Garland, who warned that the Justice Department would relentlessly pursue those who attempt to manipulate the system, irrespective of the technological veneer of their operations.

The evidence presented during the month-long trial included damning testimonies from former confidants of Bankman-Fried. Both Caroline Ellison, ex-girlfriend and former head of Alameda, and FTX co-founder Gary Wang, turned against him in court. Their cooperation with the prosecution painted a grim picture of the inner workings of FTX and Alameda.

At the heart of the deliberation was the question of intent. Did Bankman-Fried knowingly syphon customer funds for personal ventures and to mitigate Alameda's losses post the crypto downturn? With the jury's verdict, it's evident that they believed he did. The weight of this case is underscored by comparisons with the trial of Elizabeth Holmes, founder of the ill-fated medical device firm Theranos. Much like Bankman-Fried, Holmes faced charges of large-scale fraud, leading to her conviction and subsequent 11-year prison sentence.

As the dust settles on FTX, the crypto world and beyond await Bankman-Fried's sentencing on March 28. The outcome stands as a stark reminder of the consequences awaiting those who tread the precarious line between ambition and legality in the rapidly evolving world of digital finance. This is also a reminder of the continuously emerging select bad actors in crypto which tarnish the name of the entire industry and how they must be denounced and stopped immediately.

SEC Probes PayPal's New Stablecoin as PYUSD Marks Rapid Growth

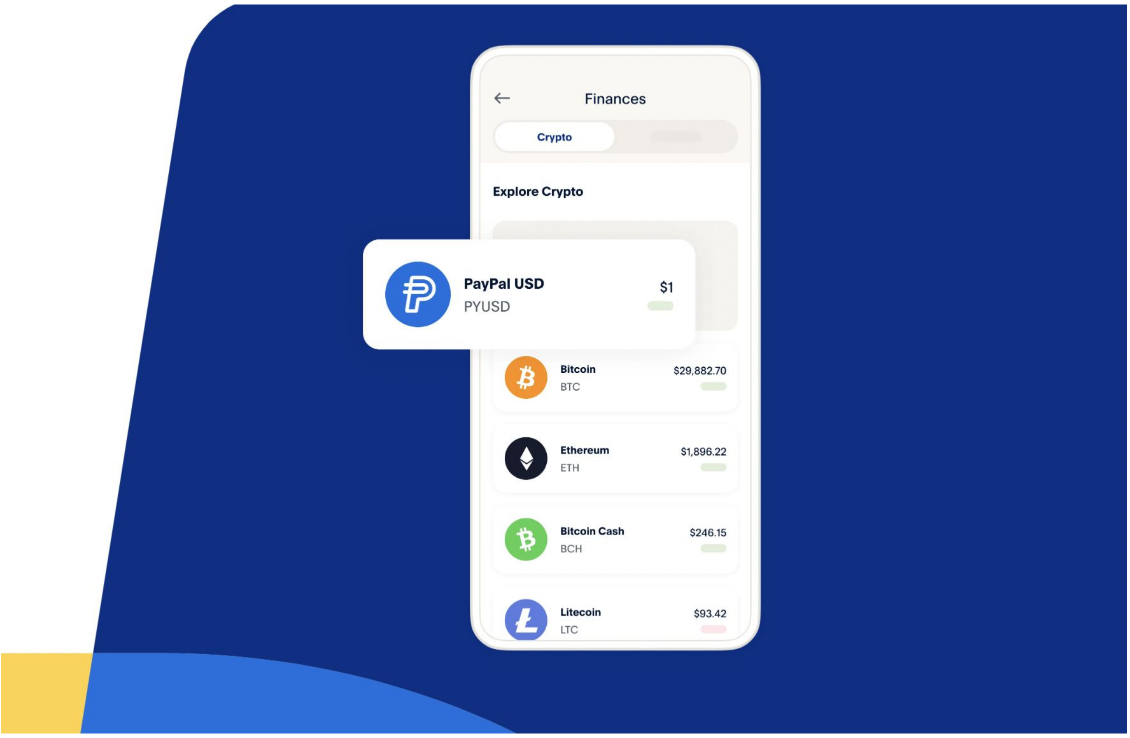


Figure 15. SEC Probes PayPal's New Stablecoin as PYUSD Marks Rapid Growth

- **PayPal has been subpoenaed by the SEC for documents related to its newly launched US dollar-backed stablecoin**
- **PYUSD has quickly grown to a market cap of approximately $159 million, yet, the latest move by the SEC is a testament to the increasingly challenging regulatory climate for cryptocurrency in the United States**

Payment giant PayPal has been issued a subpoena by the United States Securities and Exchange Commission (SEC) concerning inquiries into its stablecoin tied to the US dollar. This development was made public on November 2nd through PayPal's third-quarter fiscal report submitted to the SEC.

On November 1st, PayPal acknowledged receipt of the SEC's demand for specific documents. The company confirmed its cooperation with the regulatory body in a statement.

This move by the SEC comes on the heels of the launch of PayPal's PYUSD stablecoin in early August. PYUSD issued by Paxos Trust, is engineered to facilitate digital transactions. The stablecoin, anchored to US dollar reserves, short-term government securities, and similar cash equivalents, operates on the Ethereum blockchain.

A representative from Paxos reported a favourable market reception for PYUSD, with the stablecoin amassing a market cap of $150 million within two months of its debut. Present figures estimate PYUSD's market capitalisation at approximately $159 million, with 24 hour trading volume nearing $1.4, as per CoinGecko's data.

In September, PayPal revealed plans to incorporate PYUSD into Venmo, enhancing the service's offering by enabling purchases and peer-to-peer transfers of the stablecoin. In a broader stride towards embracing cryptocurrencies, PayPal has not limited its expansion to the US market alone. On October 31, the company secured authorization from the United Kingdom's Financial Conduct Authority to extend its crypto services within the UK.

The latest move by the SEC is a testament to the increasingly challenging regulatory climate for cryptocurrency in the United States.

Georgia's National Bank Initiates CBDC Pilot with Ripple

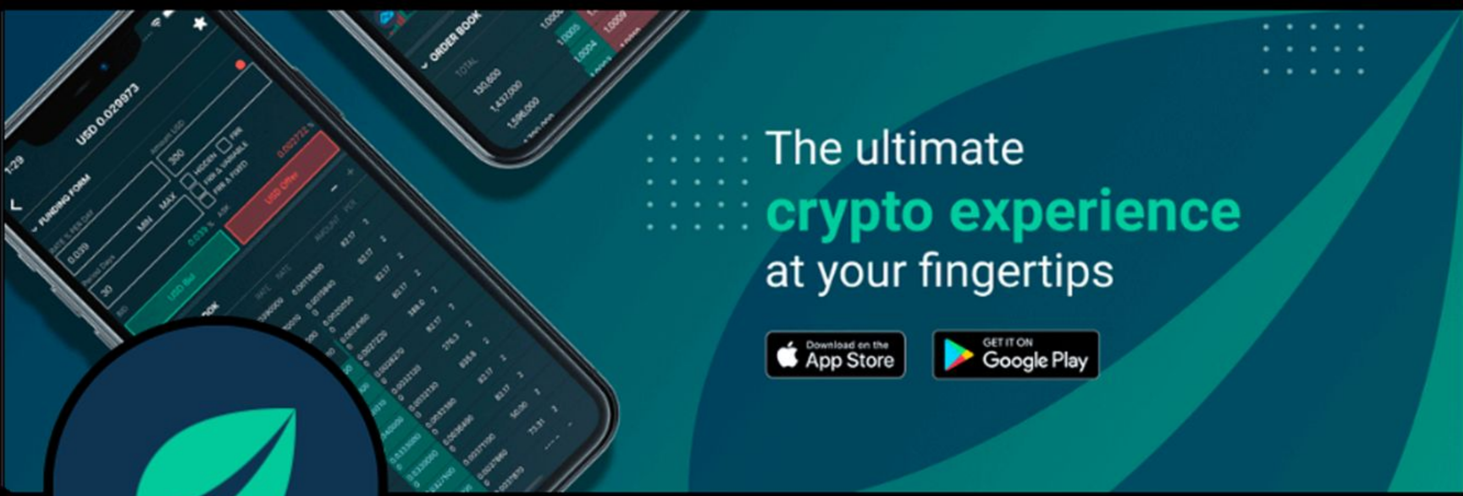
Figure 16. Georgia's National Bank Initiates CBDC Pilot with Ripple

- **The National Bank of Georgia has commenced a pilot project using Ripple to test the viability of a digital Georgian lari, targeting applications across public, business, and retail sectors.**
- **Ripple was selected for its experience in piloting CBDCs, with the project aiming to integrate blockchain more deeply into Georgia's public financial infrastructure**

The National Bank of Georgia (NBG) is embarking on a collaborative venture with Ripple, the blockchain payments group, to assist in the development of Georgia's digital currency initiative. The aim is to focus on using Ripple's specialised CBDC platform to explore the real-world applications of a digital version of the Georgian lari, targeting the public sector, commercial enterprises, and individual consumers. Still at an exploratory phase, the NBG confirmed the aim is to develop the project into a full-fledged trial within a live operational setting.

The NBG's choice of Ripple as its primary collaborator for the CBDC project stems from Ripple's track record of managing other successful pilot deployments, encompassing CBDC digital frameworks and integrating applications like smart contracts and asset tokenisation.

This latest announcement is the latest in Ripple's growing list of CBDC-related projects, with existing pilot programs underway in various countries including Bhutan, Palau, Montenegro, Colombia, and Hong Kong.



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