

DeFi Risk report

April 2023 Outlook

For more information visit <https://riskfi.network> or email us at report@riskfi.network

What to expect from this report?

FOREWORD

RiskFi offers institutional grade resources on cryptocurrency landscape from a risk perspective.

Our risk assessment begins by analyzing macroeconomic conditions in United States. These conditions have a significant impact on the value of cryptocurrencies.

We track macro events impacting equity and bond markets, and their correlations with Bitcoin. We also scrutinize the broader cryptocurrency ecosystem's influence on Bitcoin fluctuations.

We then establish the correlation (beta) between Bitcoin and other cryptocurrencies (alt coins). We do this by examining their interrelationships and determining their mutual influence.

KEY TAKEAWAYS FROM THIS REPORT

In this report we compute the risk scenario shocks on five cryptocurrencies. The risk is expressed as a percentage drawdown (loss).

We use the current macro scenario **i.e last six months** to compute the risk and drawdown parameters. We do this by taking the volatility of each crypto and comparing it against macro variables like equities, bonds, and commodities. **We compute the beta of the alt coins to Bitcoin.**

We provide three levels of shock for each scenario - **Least, Stressed,** and **Adverse**. These shock levels can aid investors in mitigating risks according to their portfolio strategies.

We also provide the shocks computed for different macroeconomic events (ie historical scenarios). Investors can further use these scenario shocks to simulate their own portfolio losses.

MACRO TO CRYPTO

RATE HIKES AND BANK RUNS

In March 2023, the US economy experienced a period of turmoil. Additionally, the Federal Reserve increased the interest rate by another 25 basis points. The consistent rate hikes over eight months to combat inflation had unintended consequence of causing bank runs. Silicon Valley Bank (SVB), Silvergate Bank and First Republic Bank all faced bank runs. These bank runs evoked memories of the 2008 financial crisis. Failure of SVB was a catalyst for a series of changes to prevent contagion in the banking sector.

STABLECOINS TUMBLE

Stablecoins are vulnerable to disruptions in the financial system. Rate hikes and bank runs had a direct impact on stablecoins. Circle's stablecoin USDC value [dropped to \\$3.3bn as it held reserves in SVB](#). Circle attempted to move its reserves from SVB but could not before the USDC depeg. Furthermore, Binance, the largest cryptocurrency exchange globally, faces a lawsuit from US regulators for alleged [willful evasion](#), exacerbating the investor capital of [\\$1.6 billion](#) from Binance.

BITCOIN RISES AS STABLECOINS TUMBLE

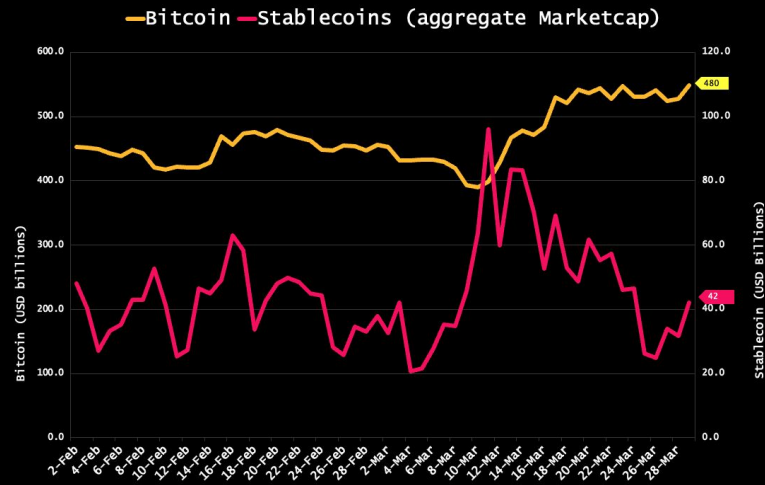
The tumbling stablecoin market cap was one of the several reasons for the rise in value of Bitcoin. Bitcoin rose from a market cap of \$248 billion at the beginning of March to \$438 billion by end of the march. We saw similar trends for other cryptocurrencies. Figure on the right, depicts the flight of capital from Stablecoins to Bitcoin.

BITCOIN RISES DUE TO BANK RUNS

The recent macroeconomic uncertainty, instability, bank runs, and fear have accelerated capital movement from banking to BTC and others cryptos.

“Many stablecoins rely on banks to hold their reserves in fiat currency. Capital shifted from stablecoins to blue chip cryptos as we started to see bank runs in March”

Figure 1 : Flight of capital from Stablecoins to Bitcoin



“Stablecoin aggregate Marketcap” is the market capitalization of three stablecoins; Tethers’ USDT, Circles’ USDC and MakerDAOs’ DAI.

Bitcoin risk outlook

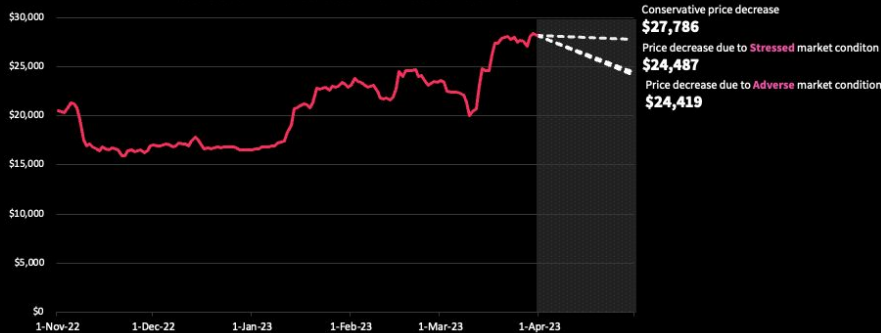
Coin
BTC

Closing price
\$28,478

Market Cap
\$550 Billion

Beta with S&P500
1.11

Price fall of BTC due to market condions



Shocks



CURRENT MACRO ENVIRONMENT

CURRENT MACRO SCENARIO - LAST SIX MONTHS

By the end of day 31st March, 2023 the price of Bitcoin remains at USD \$28,478 with a Market Capitalization of USD \$550 billion. Bitcoin continues to remain sensitive to US Equities, with a beta of 1.11 with S&P500 index.

From a risk perspective, three shock levels capture the potential fall in BTC value. These are **Least**, **Stressed**, and **Adverse** as it relates to market conditions:

- In an **uneventful** market condition, BTC's price is expected to fall by 2%, resulting in a price of \$27,786.
- In a **stressed** market condition, BTC's price is expected to fall by 14%, resulting in a price of \$24,486.
- In an **adverse** market condition, BTC's price is expected to fall by 15%, resulting in a price of \$24,159.

HISTORIC MACRO ECONOMIC STRESSES

The below table summarizes historic macroeconomic events. This further provides a view on potential fall in prices if similar events were to re-occur.

Macroeconomic events impacting bitcoin price	Shocks			BTC prices after applying the shocks to current price		
	Least	Stressed	Adverse	Least	Stressed	Adverse
2022 - Terra luna collapse (Crypto contagion)	-5%	-20%	-22%	\$27,033	\$22,752	\$22,279
2022 - Russia Ukraine war	-5%	-22%	-23%	\$27,194	\$22,330	\$22,070
2020 - Covid Crisis	-2%	-33%	-53%	\$27,826	\$19,024	\$13,489
2008 - Mortgage Crisis	-3%	-29%	-37%	\$27,688	\$20,208	\$17,906

Ethereum risk outlook

CURRENT MACRO SCENARIO - LAST SIX MONTHS

By the end of day 31st March, 2023 the price of Ethereum is \$1,812. **Bitcoin is our base layer for all other cryptocurrencies**, and we compute the sensitivity of Ethereum to changes in Bitcoin. The beta value of 1.06 indicates that Ethereum is more responsive to fluctuations in Bitcoin than the overall market.

- For a **least** shock of -6% , the price would be \$1,709.
- For a **stressed** shock of -32%, the price would be \$1,233.
- For **adverse** shock of -52%, the price would decrease to \$824.

HISTORIC MACRO ECONOMIC STRESSES

Macroeconomic events impacting price	Shocks			ETH prices after applying the shocks to current price		
	Least	Stressed	Adverse	Least	Stressed	Adverse
2022 - Terra luna collapse (Crypto contagion)	-3%	-14%	-16%	\$1,762.0	\$1,559.4	\$1,528.7
2022 - Russia Ukraine war	-4%	-46%	-80%	\$1,740.0	\$979.4	\$367.7
2020 - Covid Crisis	-5%	-68%	-103%	\$1,722.1	\$575.4	\$0.0

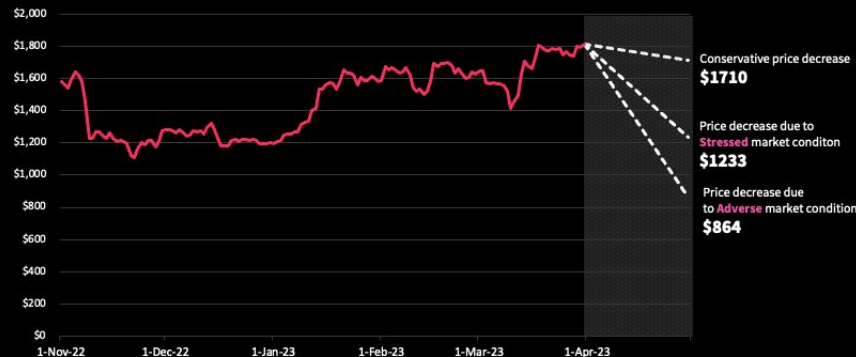
Coin
ETH

Closing price
\$1,812

Market Cap
\$216 Billion

Beta with Bitcoin
1.07

Price fall of ETH due to market condions



Shocks



Solana risk outlook

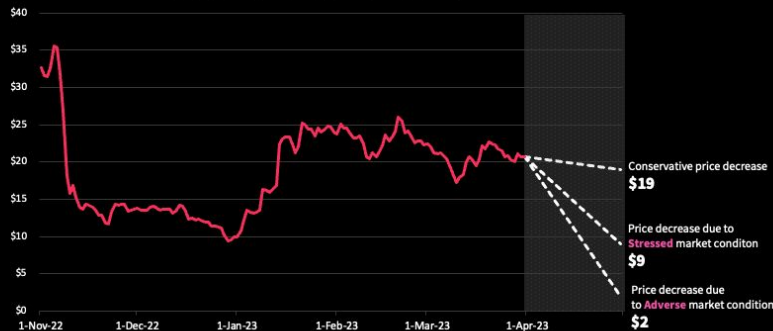
Coin
SOL

Closing price
\$21

Market Cap
\$8.1 Billion

Beta with Bitcoin
1.86

Price fall of SOL due to market condions



Shocks



CURRENT MACRO SCENARIO - LAST SIX MONTHS

By the end of day 31st March, 2023 the price of Solana is \$21. The sensitivity of Solana to changes in Bitcoin is represented by a beta value of 1.86, indicating that Solana has a strong volatility factor with Bitcoin price fluctuations.

- For a **least** shock of -10%, the price would be \$19.
- For a **stressed** shock of -56%, the price would be \$9.
- For **adverse** shock of -91%, the price would be \$2.

Caution: Solana appears to exhibit a high degree of sensitivity, and requires a comprehensive risk mitigation strategy to mitigate potential risks

HISTORIC MACRO STRESSES

Macroeconomic events impacting price	Shocks			SOL prices after applying the shocks to current price		
	Least	Stressed	Adverse	Least	Stressed	Adverse
2022 - Terra luna collapse (Crypto contagion)	-6%	-28%	-31%	\$19.5	\$14.9	\$14.2
2022 - Russia Ukraine war	-7%	-80%	-139%	\$19.2	\$4.1	\$0.0
2020 - Covid Crisis	-7%	-93%	-140%	\$19.3	\$1.4	\$0.0

Note: The computed value is zero, because of high volatility, and high sensitivity to Bitcoin

Matic risk outlook

CURRENT MACRO SCENARIO - LAST SIX MONTHS

By the end of day 31st March, 2023 the price of Matic is \$1.1. The sensitivity of Matic to changes in Bitcoin is represented by a beta value of 1.1, indicating that Matic remains strongly volatile to Bitcoin price fluctuations.

- For a **least** shock of -6%, the price would be \$1.04.
- For a **stressed** shock of -33%, the price would be \$0.74.
- For **adverse** shock of -54%, the price would be \$0.50

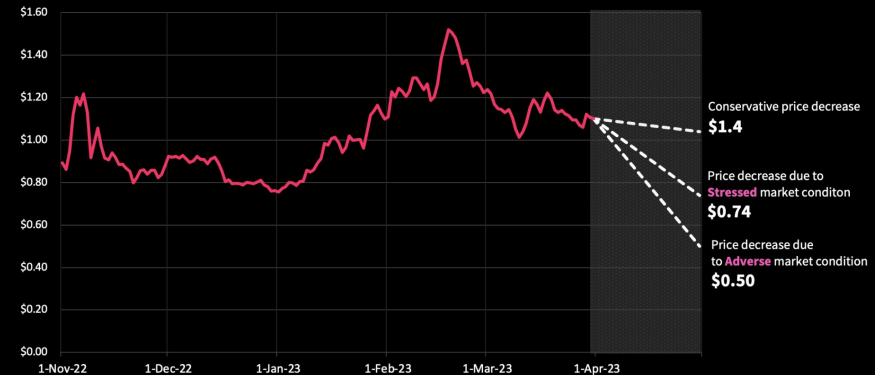
HISTORIC MACRO STRESSES

Macroeconomic events impacting price	Shocks			MATIC prices after applying the shocks to current price		
	Least	Stressed	Adverse	Least	Stressed	Adverse
2022 - Terra luna collapse (Crypto contagion)	-3%	-15%	-16%	\$1.1	\$0.9	\$0.9
2022 - Russia Ukraine war	-4%	-48%	-83%	\$1.1	\$0.6	\$0.2
2020 - Covid Crisis	-5%	-70%	-105%	\$1.0	\$0.3	\$0.0

Note: MATIC remains highly sensitive to Bitcoin. In case an adverse event (such as Covid) were to occur, the decline in BTC will impact the value of Matic more adversely.

Coin Closing price Market Cap Beta with Bitcoin
MATIC **\$1.10** **\$308** Million **1.11**

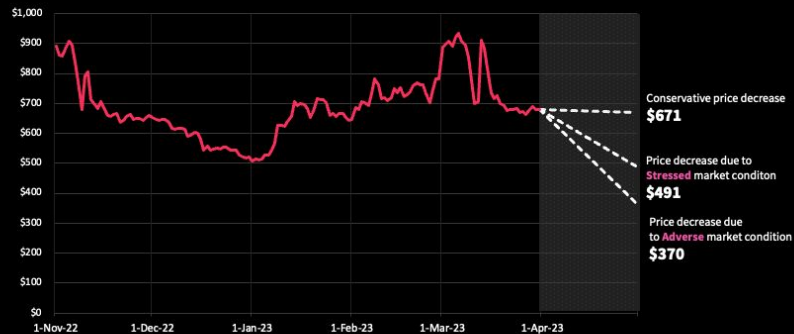
Price fall of Matic due to Market condions



MakerDAO risk outlook

Coin **MKR** Closing price **\$681** Market Cap **\$671** Million Beta with Bitcoin **0.93**

Price fall of MKR due to market conditions



Shocks



CURRENT MACRO SCENARIO - LAST SIX MONTHS

By the end of day 31st March, 2023 the price of MakerDAO is \$21. The sensitivity of MKR to changes in Bitcoin is represented by a beta value of 0.93

- For a **least** shock of -5%, the price would be \$671.
- For a **stressed** shock of -28%, the price would be \$491.
- For **adverse** shock of -46%, the price would be \$370.

HISTORIC MACRO STRESSES

Macroeconomic events impacting price	Shocks			MKR prices after applying the shocks to current price		
	Least	Stressed	Adverse	Least	Stressed	Adverse
2022 - Terra luna collapse (Crypto contagion)	-2%	-12%	-13%	\$665.0	\$602.1	\$592.6
2022 - Russia Ukraine war	-3%	-40%	-69%	\$657.0	\$408.1	\$207.9
2020 - Covid Crisis	-5%	-64%	-96%	\$648.9	\$245.4	\$25.6

DATA TABLE

RECOMMEND



**CURRENT
MACRO**
(last 6 months)

Coin	Reference	Beta	Current Price	Shocks			Prices after applying the shocks to current price		
				Least	Stressed	Adverse	Least	Stressed	Adverse
Bitcoin	S&P500	1.11	\$28,478.5	-2%	-14%	-15%	\$27,786.1	\$24,486.7	\$24,159.3
Ethereum	Bitcoin price	1.07	\$1,812.4	-6%	-32%	-52%	\$1,709.7	\$1,232.9	\$864.1
Maker	Bitcoin price	0.93	\$680.6	-5%	-28%	-46%	\$647.1	\$491.0	\$370.3
Polygon	Bitcoin price	1.11	\$1.1	-6%	-33%	-54%	\$1.0	\$0.7	\$0.5
Solana	Bitcoin price	1.86	\$20.7	-10%	-56%	-91%	\$18.6	\$9.1	\$1.8

**RUSSIA
UKRAINE
WAR**

Coin	Reference	Beta	Current Price	Least	Stressed	Adverse	Least	Stressed	Adverse
Bitcoin	S&P500	1.11	\$28,478.5	-5%	-22%	-23%	\$27,194.5	\$22,329.9	\$22,069.5
Ethereum	Bitcoin price	1.07	\$1,812.4	-11%	-46%	-56%	\$1,604.4	\$985.1	\$802.6
Maker	Bitcoin price	0.93	\$680.6	-10%	-40%	-49%	\$612.6	\$409.9	\$350.2
Polygon	Bitcoin price	1.11	\$1.1	-12%	-47%	-58%	\$1.0	\$0.6	\$0.5
Solana	Bitcoin price	1.86	\$20.7	-20%	-80%	-97%	\$16.5	\$4.2	\$0.5

**COVID
PANDEMIC**

Coin	Reference	Beta	Current Price	Least	Stressed	Adverse	Least	Stressed	Adverse
Bitcoin	S&P500	1.11	\$28,478.5	-2%	-33%	-53%	\$27,825.5	\$19,024.5	\$13,489.0
Ethereum	Bitcoin price	1.07	\$1,812.4	-4%	-46%	-80%	\$1,740.0	\$979.4	\$367.7
Maker	Bitcoin price	0.93	\$680.6	-3%	-40%	-69%	\$657.0	\$408.1	\$207.9
Polygon	Bitcoin price	1.11	\$1.1	-4%	-48%	-83%	\$1.1	\$0.6	\$0.2
Solana	Bitcoin price	1.86	\$20.7	-7%	-80%	-139%	\$19.2	\$4.1	\$0.0

**TERRA
LUNA
COLLAPSE**

Coin	Reference	Beta	Current Price	Least	Stressed	Adverse	Least	Stressed	Adverse
Bitcoin	S&P500	1.11	\$28,478.5	-5%	-20%	-22%	\$27,032.6	\$22,751.6	\$22,279.2
Ethereum	Bitcoin price	1.09	\$1,812.4	-8%	-41%	-53%	\$1,673.2	\$1,076.5	\$854.6
Maker	Bitcoin price	1.02	\$680.6	-7%	-38%	-50%	\$631.7	\$421.7	\$343.6
Polygon	Bitcoin price	1.11	\$1.1	-8%	-41%	-54%	\$1.0	\$0.6	\$0.5
Solana	Bitcoin price	1.49	\$20.7	-10%	-55%	-72%	\$18.5	\$9.2	\$5.7

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