

MEDICI CRYPTO ASSET RATING

Whitepaper

Abstract

This report introduces the inaugural version of a methodology developed by The Medici Project, aimed at consistently and systematically assessing the risk parameters of various crypto tokens. This tool is designed to empower investors and managers with the knowledge to make well-informed decisions regarding the level of risk they are prepared to accept in pursuit of their targeted returns. Our goal is to establish this as the first in a series of professional-grade instruments that will serve as benchmarks for decision-making and risk management, articulated in terms that are accessible to professionals across both Decentralized Finance (DeFi) and Traditional Finance (TradFi) sectors.

The outcome of our rating process will categorize the spectrum of crypto assets into three distinct risk levels, ranging from low to high risk. The evaluation criteria consist of: (1) the collateralization status of a coin, (2) its weekly return volatility, (3) the length of its price history, and (4) its average daily trading volume. These risk classifications will serve as crucial inputs for the investment strategy employed by The Medici Project's flagship crypto fund, The Medici Stable Income Fund.

Introduction

In the dynamic world of cryptocurrency investment, there's a discernible inclination among investors towards leveraging quantitative analyses reflective of strategies prevalent in Traditional Finance (TradFi) or Centralized Finance (CeFi). Despite this, a considerable segment of the investor base is drawn to more fluid investment methodologies. These methods, deeply rooted in individual research, market trends, and occasionally, the collective sentiment, have the potential to yield significant returns for some investors. However, the intensive engagement these strategies demand often renders them less viable for the sustained preservation of capital.

Confronted with this challenge, our team set out on a mission to create a fund designed to secure stable returns from the crypto investment ecosystem. Our focus was on achieving low-to-mid yield returns, targeting capital protection, and maintaining high liquidity. To realize this vision, it was imperative to devise a system that not only allowed our managers to procure consistent returns from the cryptocurrency markets but also provided effective risk

management tools for clients' investments to defend against market volatilities. This approach aimed to mitigate the necessity for frequent fund reallocations and introduce a viable option for capital "parking" within the crypto space—a concept previously unattainable.

The foremost obstacle we encountered was the development of a system adept at assessing the risk profiles of diverse cryptocurrency assets, thus facilitating a confident distinction among them. This document presents our initial endeavors to formulate a risk assessment framework for cryptocurrency assets, with the ambition of furnishing investors with the essential tools required for making informed decisions about stable investment avenues in the unpredictable terrain of the cryptocurrency market.

The Rating System

The Medici research team has identified thirty-three coins from a diverse array of blockchain networks, not limited to Ethereum, to be included in the Medici coin universe for our rating process. These coins are evaluated based on a set of four distinct criteria:

1. A binary assessment of whether a coin is collateralized.
 - a. This evaluation does not currently differentiate by the type of collateral (e.g., physical assets, cryptocurrencies, or stablecoins) but rather applies a binary classification, with collateralization considered a positive attribute.
2. The standard deviation of weekly returns, also known as weekly return volatility. This metric is derived from the historical price series obtained from Yahoo Finance.
3. The duration of a coin's price history, with data sourced from Yahoo Finance.
4. The average daily trading volume, calculated using data from Yahoo Finance.

In addition to this rating process, Medici employs a separate research methodology to periodically review and update the composition of the Medici coin universe. This review process ensures the relevance and accuracy of our ratings but is beyond the scope of this report.

Within our current selection, ten coins are identified as collateralized, while the remainder are uncollateralized.

The Medici Coin Universe

The following are the *collateralized* coins in the Medici universe:

BUSD	BUSD is a cryptocurrency and operates on the BNB Beacon Chain (BEP2) platform.	MIM	Magic Internet Money
CVXCRV	Convex CRV is a cryptocurrency and operates on the Ethereum platform.	stETH	Lido Staked ETH is a cryptocurrency launched in 2020 and operates on the Ethereum platform.
DAI	DAI is a cryptocurrency and operates on the Ethereum platform.	USDC	USDC is a cryptocurrency and operates on the Ethereum platform.
FRAX	FRAX Share is a cryptocurrency launched in 2020 and operates on the Ethereum platform.	USDT	Tether USDt is a cryptocurrency and operates on the Ethereum platform.
LUSD	Liquidity USD is a cryptocurrency launched in 2021 and operates on the Ethereum platform.	WBTC	Wrapped Bitcoin is a cryptocurrency and operates on the Ethereum platform.

The following are the *uncollateralized* coins in the Medici universe:

ADA	Cardano (ADA) is a cryptocurrency launched in 2017.	LINK	Chainlink (LINK) is a cryptocurrency and operates on the Ethereum platform.
APT	Apricot Finance is a cryptocurrency and operates on the Solana platform.	LTC	Litecoin (LTC).
ATOM	Cosmos (ATOM) is a cryptocurrency.	MATIC	Polygon (MATIC).
AVAX	Avalanche (AVAX) is a cryptocurrency launched in 2020.	OKB	OKB (OKB) is a cryptocurrency and operates on the Ethereum platform.
BCH	Bitcoin Cash (BCH).	SHIB	Shiba Inu (SHIB) is a cryptocurrency and operates on the Ethereum platform.
BNB	BNB (BNB).	SOL	Solana (SOL) is a cryptocurrency launched in 2020.
CRV	Curve DAO Token (CRV) is a cryptocurrency and operates on the Ethereum platform.	TON	Tokamak Network (TON) is a cryptocurrency launched in 2017 and operates on the Ethereum platform.
DOGE	Dogecoin (DOGE).	TRX	TRON (TRX).
DOT	Polkadot (DOT).	UNI	Uniswap (UNI) is a cryptocurrency launched in 2020 and operates on the Ethereum platform.
ETC	Ethereum Classic (ETC).	XMR	Monero (XMR).
GMX	GMX (GMX) is a cryptocurrency launched in 2021 and operates on the Avalanche C-Chain platform.	XRP	XRP (XRP).
LEO	UNUS SED LEO (LEO) is a cryptocurrency and operates on the Ethereum platform.		

Medici Rating Methodology

This section outlines the systematic process of our rating methodology, described through a series of steps:

Step 1: Segregation Based on Weekly Volatility

First, we divide the coin universe into two groups according to their weekly return volatility.

- Coins with a weekly return volatility of less than 5% are classified as the lower risk group,
- Coins with volatility equal to or greater than 5% are designated as the higher risk group.

The subsequent steps are applied to each group separately, leading to a final ranking where the lower risk group is prioritized over the higher risk group in the overall ranking (refer to Step 7). By design, coins in the lower risk group inherently receive a superior ranking compared to those in the higher risk group.

For context, the weekly return volatility for the Russell 2000 (small-cap index) averages about 3%, and for the S&P 500 (large-cap index), about 2%.

Step 2: Ranking by Weekly Return Volatility

Within each group, coins are ranked based on their weekly return volatility, with the coin exhibiting the lowest volatility awarded rank 1.

Step 3: Ranking by Average Daily Trading Volume

Coins within each group are then ranked based on their average daily trading volume, where the coin with the highest volume receives rank 1.

Step 4: Ranking by Length of Price History

Next, coins are ranked within their respective groups based on the length of their price history, with the longest history coin securing rank 1.

Step 5: Collateralization Ranking

In each group, collateralized coins are given a rank of 1, signifying a positive attribute, while uncollateralized coins are assigned the lowest rank (for example, rank 33 in the current universe of 33 coins).

Step 6: Summation and Re-ranking

For coins within each group, the ranks from Steps 2, 3, 4, and 5 are summed, and coins are then re-ranked based on this cumulative score.

Step 7: Final Stacking and Ranking

Finally, the lower risk group is placed above the higher risk group, and the final rank of each coin is determined based on its position in this comprehensive stack.

Completion of Rankings

Upon the conclusion of Step 7, coins are assigned a Medici risk rating. The top 10 coins, deemed as low-risk, are awarded an “A” rating. Conversely, the bottom 10 coins are labeled as high-risk and receive a “C” rating. The remaining coins in the universe are assigned a “B” rating, indicating a medium risk level. This rating information is a crucial input for the Medici investment process.

As of the end of 2023, the ratings are as follows:

A Rating (Highest Grade)	B Rating (Mid Grade)		C Rating (Lowest Grade)
USDC	CVXCRV	SOL	TRX
USDT	FRAX	XMR	OKB
BUSD	ADA	XRP	MATIC
DAI	ATOM		TON
LUSD	BNB		CRV
MIM	DOGE		SHIB
WBTC	DOT		GMX
LTC	ETC		AVAX
stETH	LEO		UNI
BCH	LINK		APT

Discussion and conclusion

In this whitepaper, the Medici research team has introduced a streamlined rating methodology designed to stratify the coins within the Medici universe into three distinct risk categories. This classification awards an "A" rating to low-risk coins and a "C" rating to high-risk coins, providing a clear, actionable framework for investors. Beyond this foundational methodology, the team is actively exploring several enhancements aimed at refining our approach to better serve the needs of investors, Medici's clients, and the evolving cryptocurrency landscape.

One notable extension under consideration involves incorporating the return dimension into our assessment, thereby allowing for a more nuanced analysis of the risk/return tradeoff. This addition aims to provide investors with a more comprehensive understanding of potential investment outcomes, enhancing the decision-making process.

Additionally, we are examining the possibility of adjusting the weightings assigned to our current criteria. This reflects our understanding that the significance of certain factors, such as the length of a coin's price history, may diminish as the cryptocurrency market matures and new dynamics emerge. Such adjustments would ensure our methodology remains both relevant and responsive to the changing nature of crypto assets.

In conclusion, while the methodology presented in this report offers a simplified approach to rating cryptocurrency risks, it nevertheless furnishes investors with valuable insights. These insights are instrumental for the investment process in Medici's Stable Income Fund, guiding investment strategies and risk management practices. As we continue to refine our methodology and explore new extensions, our ultimate goal remains to empower investors with the tools and knowledge necessary to navigate the complex and dynamic world of cryptocurrency investment confidently.