

Cryptocurrencies and the Sharpe Ratio of Traditional Investment Models

How did portfolios perform during the pandemic?

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Commissioned by Iconic Funds & Cryptology Asset Group

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Introduction

Just over a year ago, Iconic Funds published a report analyzing the impact of cryptocurrencies on the performance of traditional portfolios. Our report concluded that a small, rebalancing allocation to cryptocurrencies has a significant impact on the Sharpe ratio of all the portfolios investigated. We have updated our analysis to determine whether an allocation to cryptocurrencies would have benefitted these same portfolios over the past 12 months.

The past year was special for most investors because most portfolios took a considerable hit, due to the spread of the corona pandemic, lock downs and the resulting economic downturn. This report analyses whether cryptocurrencies could have helped investors weather the crisis a bit better. The hypothesis underlying this report is that the Sharpe Ratio (Return vs. Volatility) increases for all models by including cryptocurrencies in the asset allocation. To examine the impact cryptocurrencies have on investment portfolios, this report investigates different portfolio structures, with particular focus on the following investment models: a traditional stock/ bond portfolio (with weights of 50/50 and 80/20), a balanced portfolio (stocks/ bonds/ real estate/ gold/ commodities), an endowment model portfolio; a family office/ high net worth individual's portfolio and a pension fund portfolio.

Figure 1: Comparison Sharpe Ratios

Investment model	Time span	Reference Index	1% Rebalancing	3% Rebalancing	5% Rebalancing
Traditional stock bond portfolio (50/50)	Up to 2021-06	6.7929	7.6619	8.9972	9.8459
	Up to 2019-12	6.8109	8.7668	9.7907	9.7122
Traditional stock bond portfolio (80/20)	Up to 2021-06	6.3342	6.9339	7.9761	8.7968
	Up to 2019-12	6.6564	8.1671	9.5328	9.7860
Balanced portfolio	Up to 2021-06	4.8814	5.7146	7.1076	8.1286
	Up to 2019-12	3.9965	6.2045	8.1212	8.5975
Endowment model	Up to 2021-06	4.7319	5.3381	6.4234	7.3207
	Up to 2019-12	4.6509	6.4220	8.2163	8.7601
Pension Fund model	Up to 2021-06	4.7008	5.4196	6.6677	7.6455
	Up to 2019-12	4.1144	6.1022	8.0165	8.5699
Family Office model	Up to 2021-06	3.4459	4.0152	5.0684	5.9859
	Up to 2019-12	2.7565	4.5318	6.7274	7.6785



Executive Summary

Cryptocurrencies are quickly establishing themselves as a new asset class. Retail investors have long profited from significant returns, but the markets are gradually opening to institutional investors as well. An example is the passing of a law allowing specialized alternative investment funds based in Germany to invest up to 20% of their assets under management into crypto currencies. This poses the question of how portfolios may benefit from an allocation to crypto currencies. This report analyses how the Sharpe ratio is impacted by adding, 1%, 3% and 5% of Cryptocurrencies to your portfolio, rebalancing monthly.

The crypto index is constructed based on the 10 largest Cryptocurrencies in the market and reweighted on an annual basis. The underlying portfolios were constructed to reflect typical exposure profiles for the differing types of investors, as shown in. Figure 1.

The analysis was first conducted in early 2020 and has now been repeated with data up through June 2021, which includes a significant contraction in the crypto markets. Despite the contraction, the results are overwhelmingly positive for a crypto allocation. As shown in Figure 1, the Sharpe ratio increased considerably for all portfolios under investigation. The reference index reflects the Sharpe ratio without any allocation to crypto currencies. The rebalanced indices indicate the indices with an allocation to crypto currencies. The annualized returns outperform the reference indices as well, as shown in the report.

This analysis showed that an allocation to Cryptocurrencies has a significant, positive impact on any of the portfolios investigated despite their volatility the recent, temporary market crash in the crypto markets. Consequently, Cryptocurrencies have proven to be an essential component of professional portfolios, even during times of economic crisis.



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