

EQRC

Oxbridge Capital Partners: Global Macro Dollar Hedge Strategy

Dr. Babak MAHDAVI-DAMGHANI

+44 (0) 781 585 2573, bmd@eqrc.co.cuk

EQRC

Context

This strategy has been constructed with the idea that it is a macro hedge to the USD. More specifically it provides clients interested, an optimal diversified portfolio of cryptocurrencies and precious metals. The portfolio's construction has been designed with methodologies at the interface between Fundamental Analysis and Machine Learning techniques. Please consult your OCP contact or/and [download our overall factsheet](#) for more information.

EQRC

EQRC is Dr. Mahdavi-Damghani's limited company officially launched in 2014 in order to create a legal platform initially and primarily focused on consultancy assignments in the Quantitative Finance industry. We strive to re-invest part of my earnings in Research & Development for activities associated to the cross between AI and Finance.

About Oxbridge Capital Partners

Oxbridge Capital Partners (OCP) is the tentative name for a fund headed by an alumni of the OMI. It is composed of 1 Quantitative Analyst and one portfolio manager. We wish to collaborate with fund incubators and diversify with multiple strategies. We only work with established incubators with impeccable reputation and significant AUM. Though OCP has strategies in Equities, Commodities and Cryptocurrencies, its objectives are to diversify in all asset classes.

Preamble: Finance as an Ecosystem

OCP does not approve or disapprove of the way historical events are portrayed in general in this document. It however, believes that enough market participants view historical events exactly as depicted in this document. Their number is such that their actions in the ecosystem of market participants influence the prices of the underlying financial securities and therefore change the way portfolios should be constructed. In some sense, real history does not matter as much as its perception for trading decisions. If you are interested in knowing more about ecosystem modelling for financial applications, you can view our [introductory video](#) on the topic. For a more in depth analysis feel free to view the more [technical video](#) or some of our HFTE papers which have been summarized in the [thesis](#) of our Senior Quant.

Brief Relevant World History

The bloodbath induced by the world wars of the previous century culminated with the Bretton Woods agreement. This addressed the concerns raised by the political leaders of the time, more specifically when it came to agreeing on a world currency backed by Gold. Issues surrounding Gold as a reserve currency (or its lack thereof) has been a recurring theme in world history going back thousands of years. It seems that all empires decide, at some point, to move away from Gold as a reserve currency. It also seems that all empires fail shortly after that. Though, the Bretton Woods agreement was arguably imperfect, it did however bring stability to the world economy. This lasted until 1971, when the USA, pressured financially by the Vietnam war, unilaterally terminated convertibility of the USD to gold, rendering it a fiat currency. In the next couple of years the UK and France also decided to move towards a system of fiat currencies and soon the whole world followed. As seen in Figure 1, a period of financial instability followed.

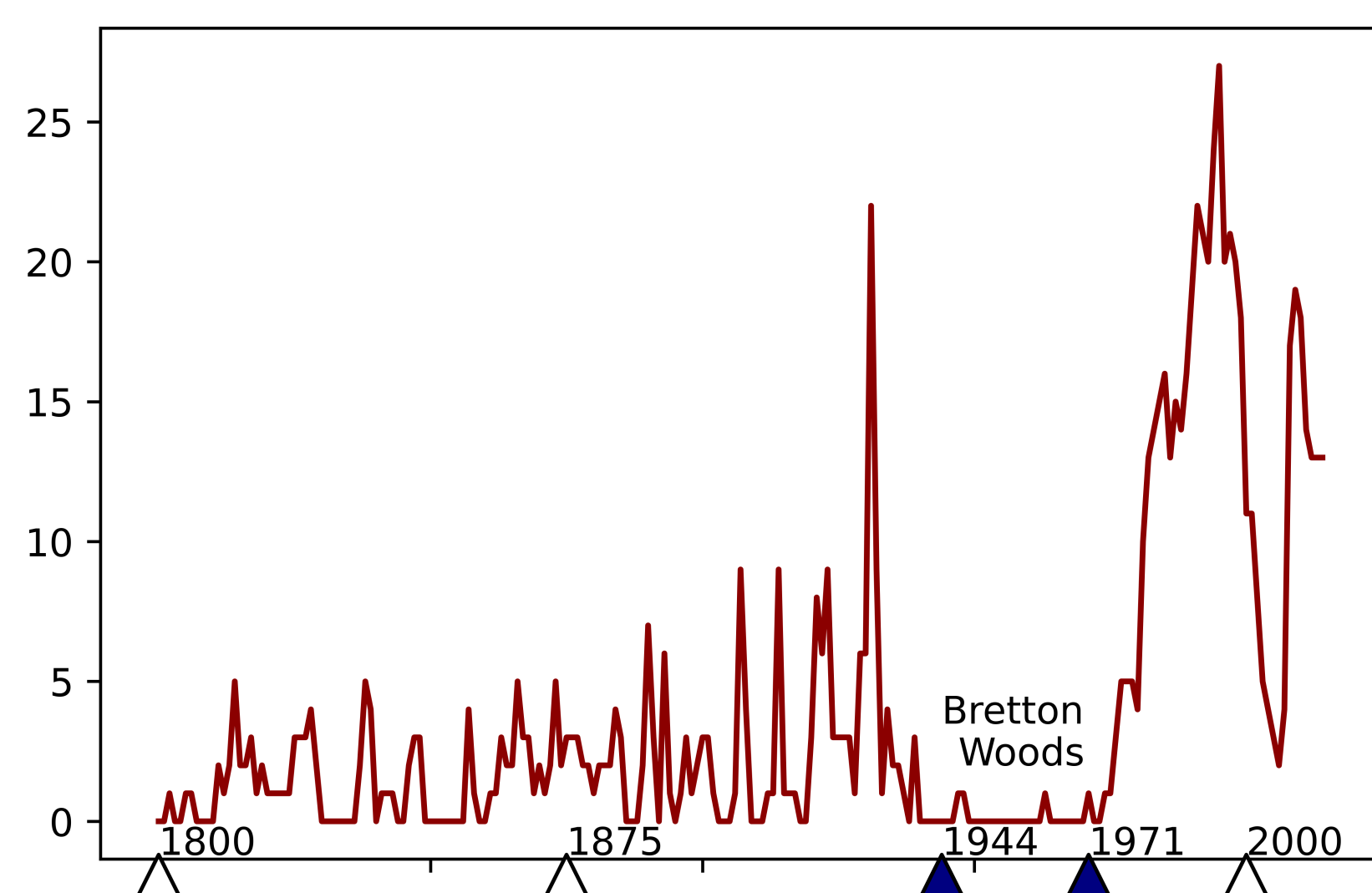


Figure 1: Number of countries having a banking crisis each year.

This issue of fiat currency is a central theme of realpolitik. For instance, because commodities are priced in USD, many nations (Venezuela, Libya etc...) rich in natural resources felt naturally compelled (the USD purchasing power dropped by around 90%

since 1971) to fight this alternative banking model with their own competing model (eg: [Gaddafi's gold-backed African currency](#)). These attempts at escaping this USD domination, have been systematically contained with a combination of conflicts that some believe has led to the creation of cryptocurrencies. The creation of an e-cash model was, in fact, predicted by Nobel Prize recipients in Economics (see Figure 2).

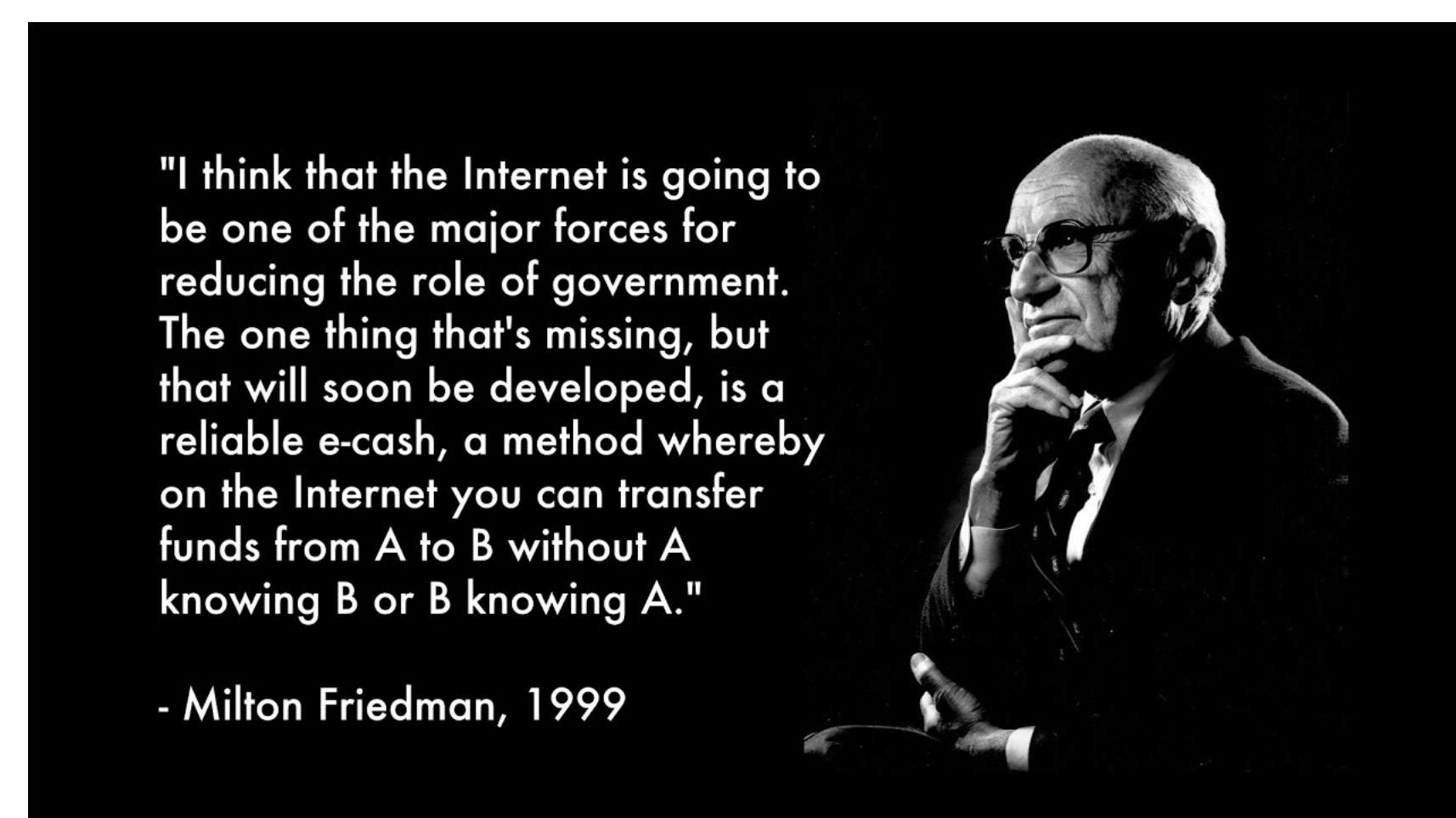


Figure 2: Clickable video on Milton Friedman interview.

Many see the USD as an unfair system but proposing to go back to the gold standard could be seen as [a war declaration on the USD](#). Many see supporting cryptocurrencies as a way to reject the USD while staying anonymous at the same time (and therefore escaping military interventions). Without delving into geopolitical theories, cryptocurrencies are another inflation resistant tool that cannot be created out of thin air, which insures sustainable value in the long term. In fact, though not perfect, cryptocurrencies address the fundamental issues that most countries have with the post Bretton Woods fiat currency model. Many countries facing embargoes have started investigating cryptocurrencies as a way to escape the USD. For instance, [Venezuela has recently launched the "Petro"](#), its own cryptocurrency backed by oil. [Other countries are also currently developing their own cryptocurrencies](#), for example Russia, China, Sweden, Japan etc. Despite [plenty of propaganda belittling the emergence of cryptocurrencies as a legitimate long term alternative to the USD](#) the cryptocurrency market cap is steadily increasing (see Figure 3). Though it remains small compared to USD, it is fast catching up to the one in circulation as well as to the Gold market. It may be unlikely to be immediately adopted by large corporations, it is however very likely that it will be the case in the coming decade. We can already see price volatility decreasing.

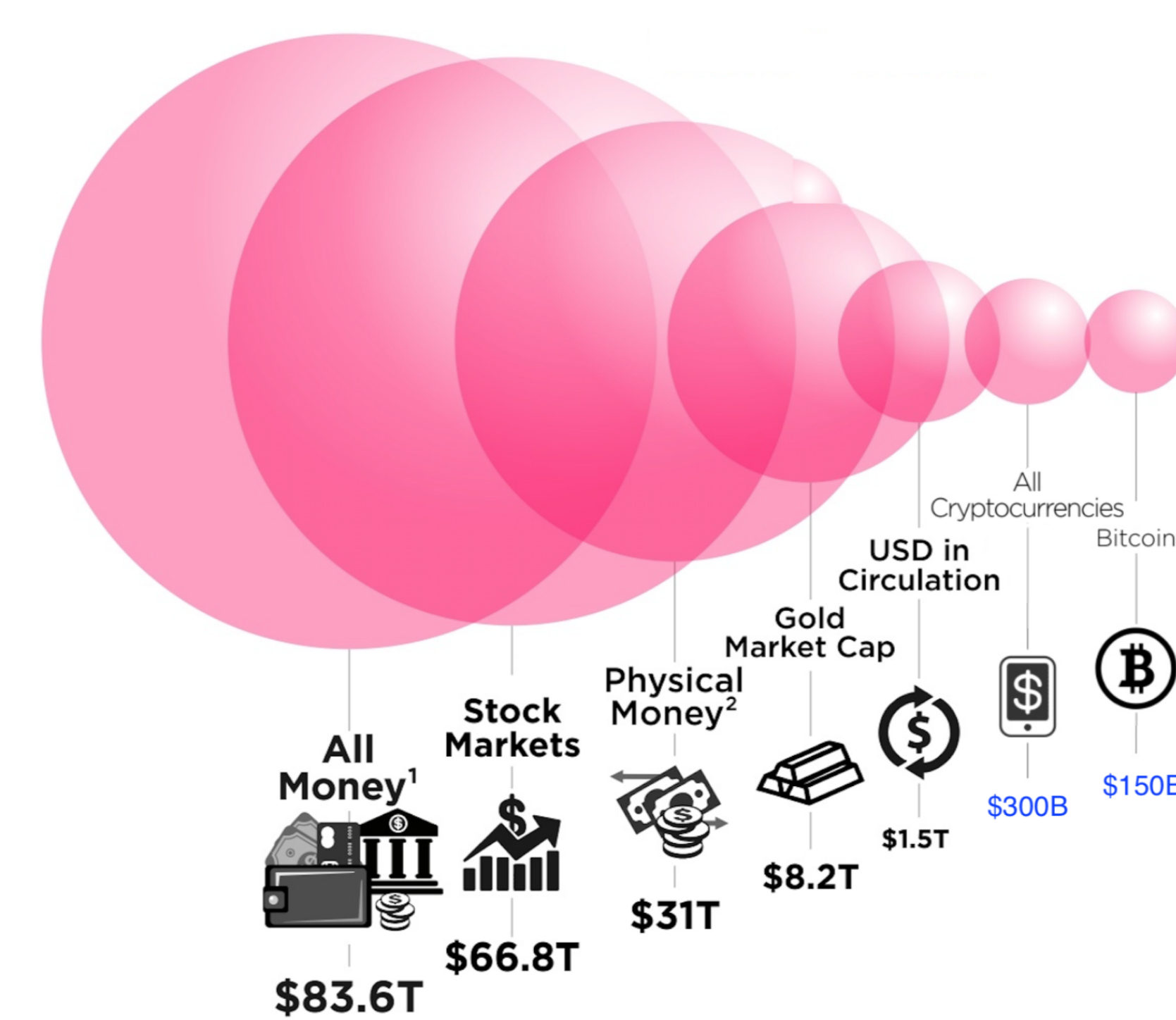


Figure 3: Putting Cryptocurrencies in perspective.

Conceptually what we propose

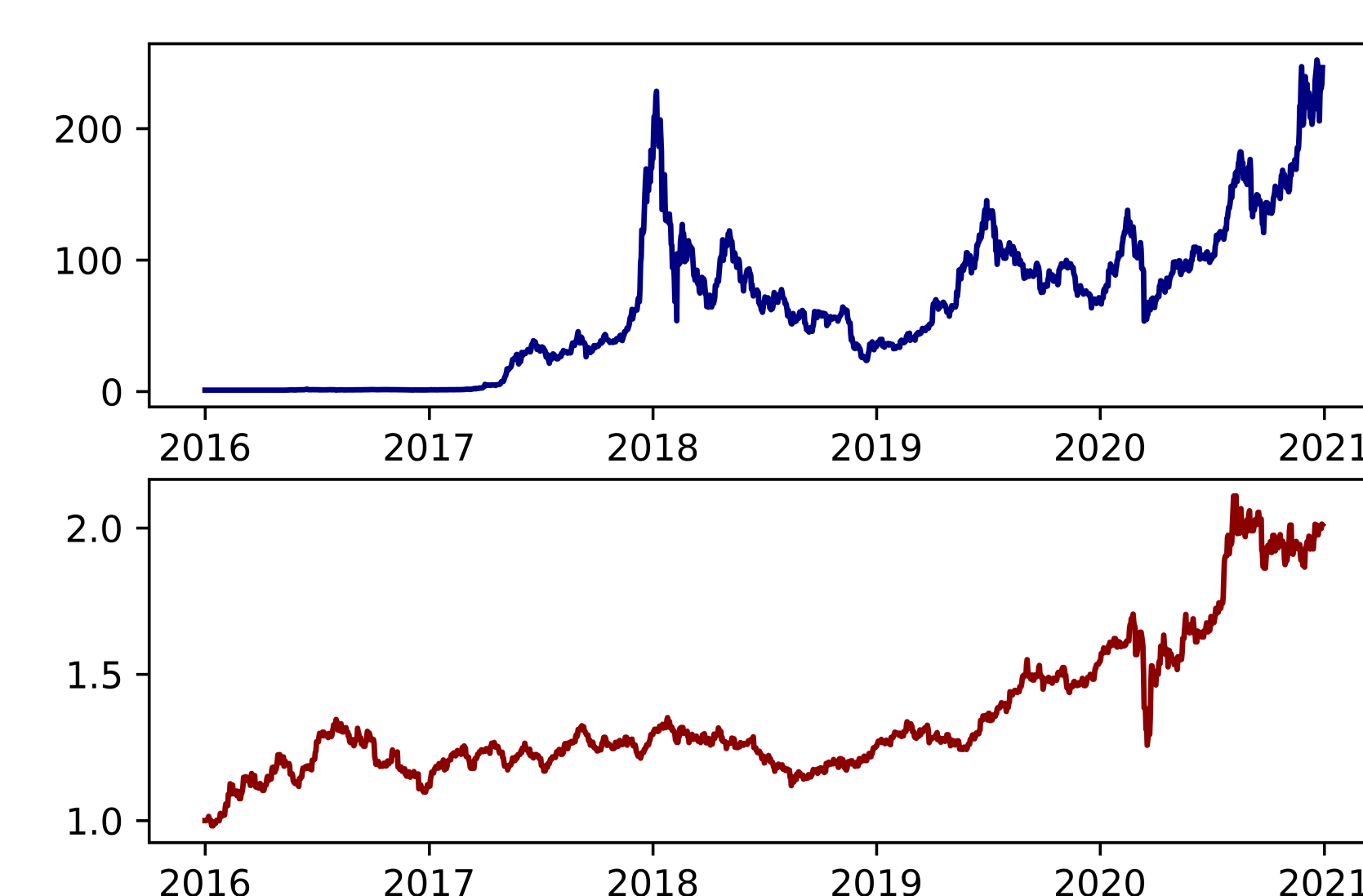


Figure 4: Top Crypto (blue) and Precious metals (red) portfolios P&L.

We offer what we are calling a USD hedge strategy consisting of precious metals and cryptocurrencies (see Figure 4). The overall

exposure to the cryptocurrency market is done through a basket weighted to reflect both an overall exposure to the market but also with a small bias towards the most promising of these cryptocurrencies. The precious metal strategy is constructed through a similar methodology. The overall strategy consists of these two sub-strategies dynamically weighted in order to abide by the rules of optimal portfolio construction. Though the independent conjunction of these two strategies yield substantial drawdowns, their combination has had substantial historical returns with more reasonable drawdowns for a cryptocurrency related strategy (Figure 5).

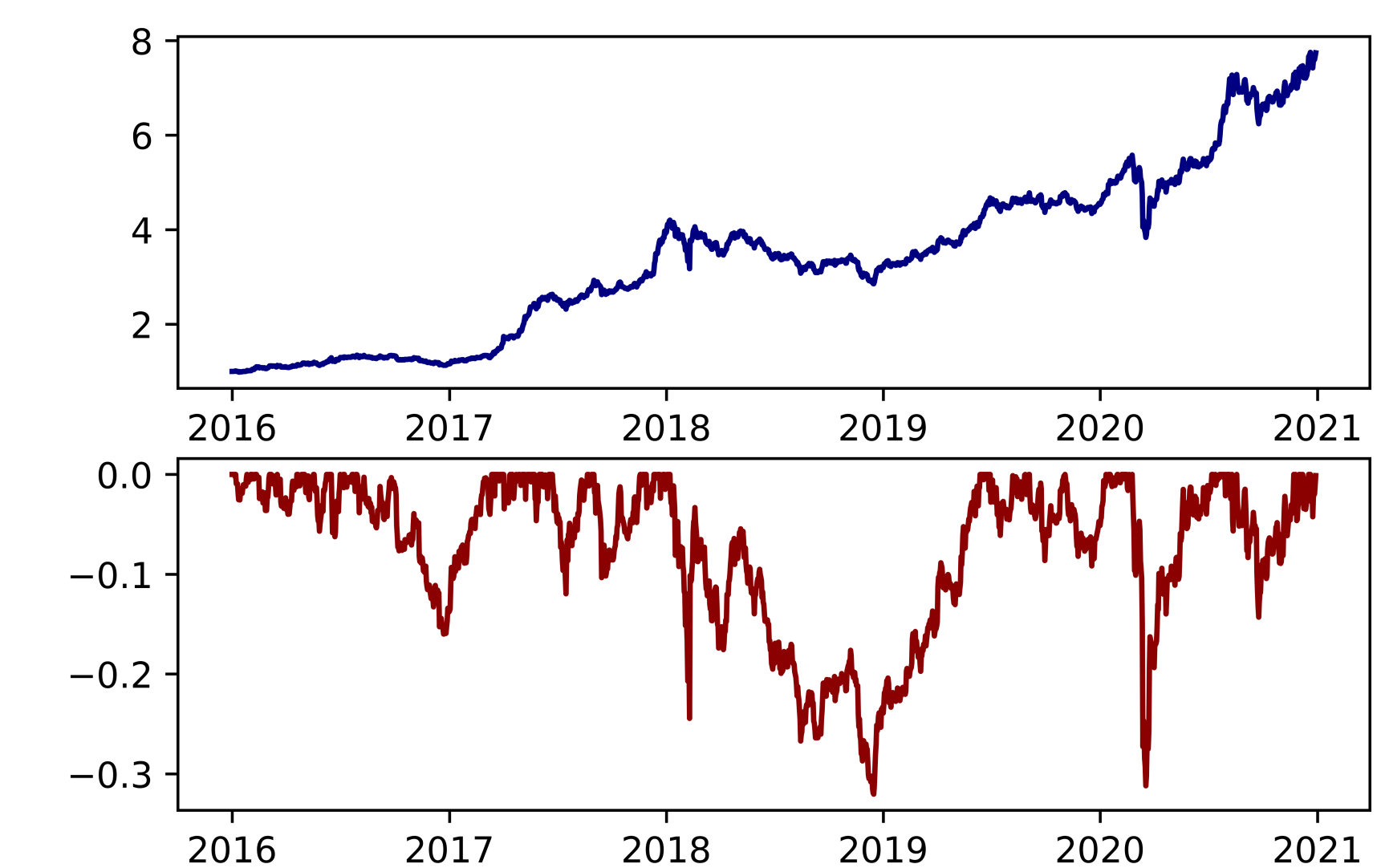


Figure 5: Our strategy P&L (blue) and its maximum drawdown (red).

The table below presents the statistics of this strategy split in a 12 months rolling window.

Start	End	Returns	Sharpe Ratio	Drawdown
2016/01/01	2016/12/31	16.2%	0.9	-16.0%
2017/01/01	2017/12/31	126.3%	4.9	-12.0%
2018/01/01	2018/12/31	-15.6%	-0.5	-32.0%
2019/01/01	2019/12/31	37.0%	2.1	-9.2%
2020/01/01	2020/12/31	58.8%	1.8	-31.2%
Yearly Averages		44.2%	1.7	-20.1%

Fees and rationale to invest

At OCP, we believe that we have the right mix of technical expertise and experience which we hope can be seen in our senior management. We require a minimum of \$20M AUM and consider a minimum of 50% of the profit generated by the fund through our collaboration. More specifically, if the fund is on a 2-20 fees model, we would take 1% of the management fees and 10% of the performance fees. We believe that we bring with us a wealth of experience and we look forward to demonstrating our abilities as we continue to strive for excellence and continued commitment to generating superior, risk-adjusted returns.

More about OCP's Quant team



Dr. Babak Mahdavi-Damghani (BMD) completed his PhD in Machine Learning for Quantitative Finance at the University of Oxford. He has a broad range of work experiences in the financial industry notably having worked for Citigroup, Socgen, GAM Systematic (previously Cantab Capital Partners), Credit Suisse, LCH, the Oxford Algorithmic Trading Programme and Andurand Capital Management. He has experience through all the major asset classes in both the buy & sell sides. He is the founder of EQRC and an alumni of the Oxford Man Institute of Quantitative Finance. He is also the author of numerous [publications](#), including cover stories of Wilmott magazine and mathematical models currently taught at the CQF (eg: [Cointelation](#), [IVP](#), [UTOPE](#) & [HFTE](#) models).

EQRC The **quant team** (QT), is composed of an exceptional group of professional talents selected through a long rigorous selection process involving, technical expertise, creativity and integrity. All the members of the QT have postgraduate diplomas from top tier Universities. The requirements are a specialised MSc in Quantitative Finance (or strongly related fields) or a PhD in a Quantitative field (Machine Learning, Mathematics, Physics, Computer Science, Engineering, Statistics) with relevant work experience.

Disclaimer

In order to abide by the regulations laid out by the SEC & FCA, we take this opportunity to remind you, that although done in good faith, this documents cannot be interpreted as financial advice and that historical returns are not a reliable measure of future performance.