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# Bitcoin Chartbook 2022

## Is This Halving Cycle Over?



Mark J. Valek  
Ronald-Peter Stöferle  
December 2021

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## 1. Status Quo of Bitcoin

Is it worth holding Bitcoin as part of one's portfolio, considering its high volatility? While this is a question that has to be answered individually, we want to share our thoughts.

## 2. Digital Gold vs. Physical Gold – Stability Meets Innovation

We show that **Gold and Bitcoin are like cousins** – Gold is the prime physical asset whereas Bitcoin is the prime digital asset. Investors appreciate both assets for very similar reasons. In terms of portfolio construction **the combination of both** might be the way to go.

## 3. The Elimination Race of Altcoins and the Role of Bitcoin

We are convinced of the **huge potential lying dormant** in some crypto projects and technologies that is just beginning to unfold. However, careless investors will bleed since the market is flooded with *Shitcoins*.

## 4. Quo Vadis, Bitcoin?

**'Is this halving cycle already over?'** According to the most robust Bitcoin valuation model (S2F model by PlanB @100trillionUSD), the coming months could become interesting. We will explore the question, whether the current halving cycle is over or not.

# 1. Status Quo of Bitcoin

*“EVERY informed person needs to know about Bitcoin because it might be one of the world’s most important developments.”*

**Leon Louw**

# As Bitcoin Performed Highly Positively in 2021...

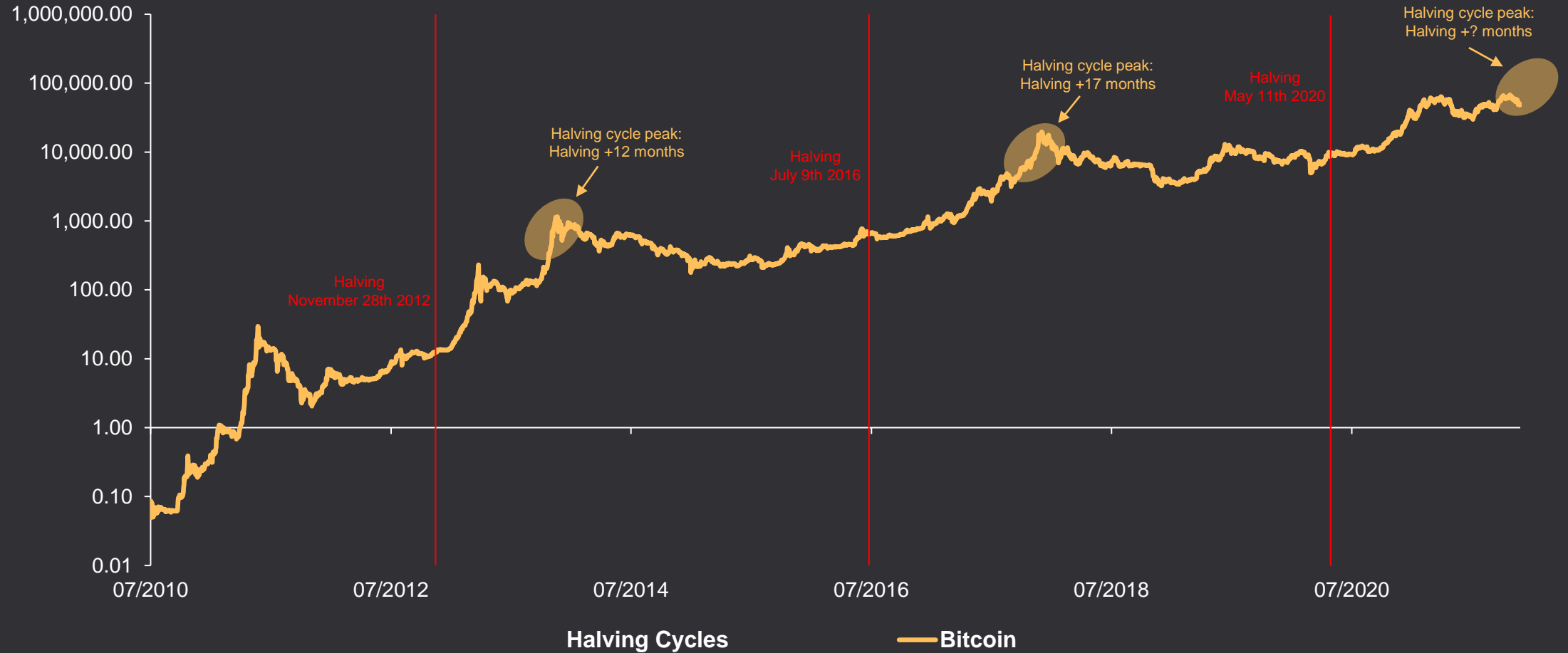
## Bitcoin Performance in Major Currencies, 2011-2021

Year	USD	EUR	GBP	AUD	CAD	CNY	JPY	CHF	INR	Average
2011	1,473%	1,526%	1,480%	1,470%	1,509%	1,403%	1,392%	1,480%	1,766%	1,500%
2012	186%	181%	174%	182%	179%	183%	223%	179%	197%	187%
2013	5,481%	5,257%	5,378%	6,408%	5,874%	5,323%	6,675%	5,343%	6,172%	5,768%
2014	-58%	-52%	-55%	-54%	-54%	-56%	-52%	-53%	-57%	-54%
2015	34%	50%	42%	51%	60%	41%	35%	36%	41%	43%
2016	124%	131%	167%	126%	117%	139%	117%	127%	130%	131%
2017	1,369%	1,187%	1,241%	1,259%	1,276%	1,277%	1,316%	1,306%	1,280%	1,279%
2018	-74%	-72%	-72%	-71%	-71%	-72%	-74%	-73%	-71%	-72%
2019	92%	97%	85%	93%	83%	95%	91%	90%	97%	91%
2020	303%	270%	291%	268%	295%	278%	283%	269%	313%	286%
2021 YTD	67%	80%	73%	79%	66%	63%	83%	74%	73%	73%
Average	818%	787%	800%	892%	849%	788%	917%	798%	904%	839%

Source: Reuters Eikon (as of December 10<sup>th</sup> 2021), Incrementum AG

# ...At This Point the Question Is: *Is the Halving Cycle Over?*

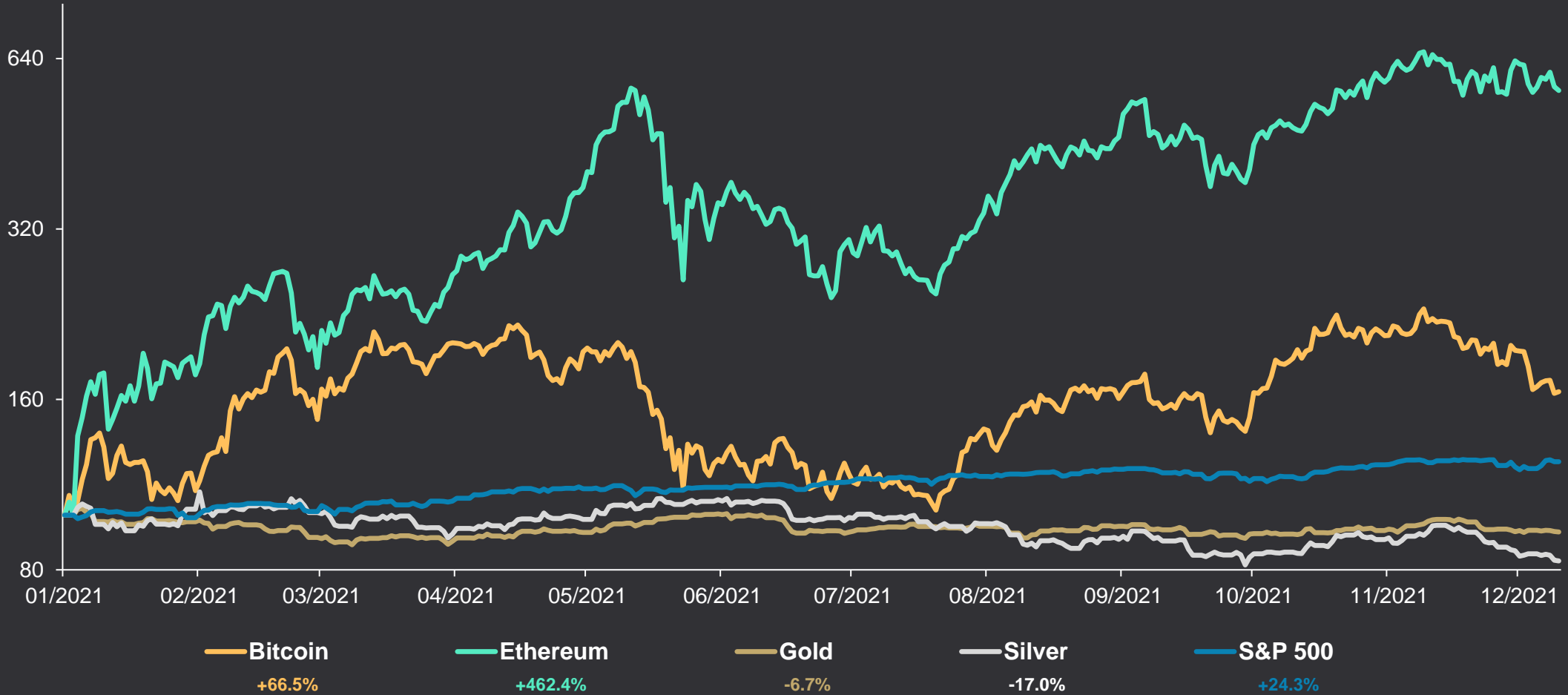
Bitcoin (log), in USD, 07/2010-12/2021



Source: blockchain.com, Reuters Eikon, Incrementum AG

# So Far in 2021 Cryptos Have Outperformed Other Assets (Again)

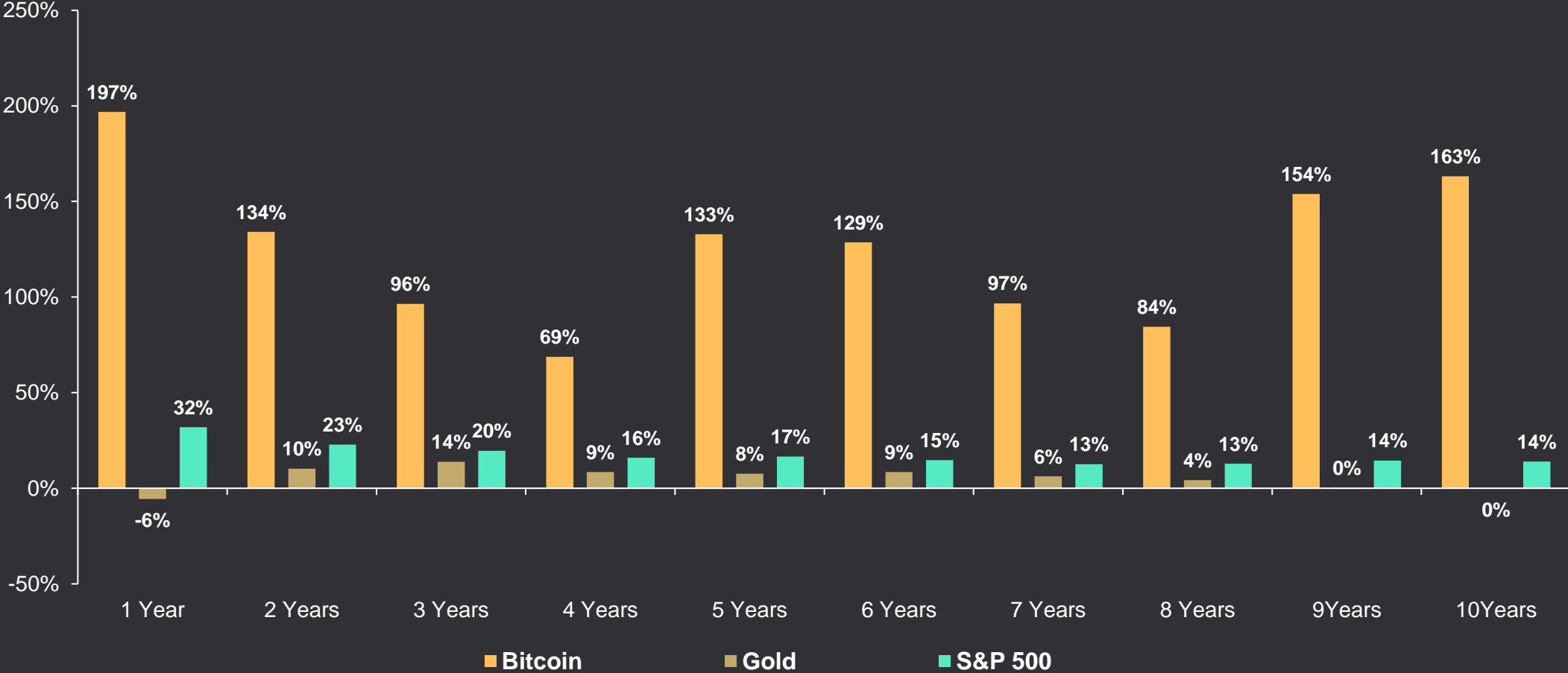
Performance Comparison, Bitcoin, Ethereum, Gold, Silver, and S&P 500, in USD, YTD (100 = 01.01.2021), 01/2021-12/2021



Source: Reuters Eikon (as of December 10<sup>th</sup> 2021), Incrementum AG

# Longer-Term Investors Have Been Enjoying Fabulous Returns

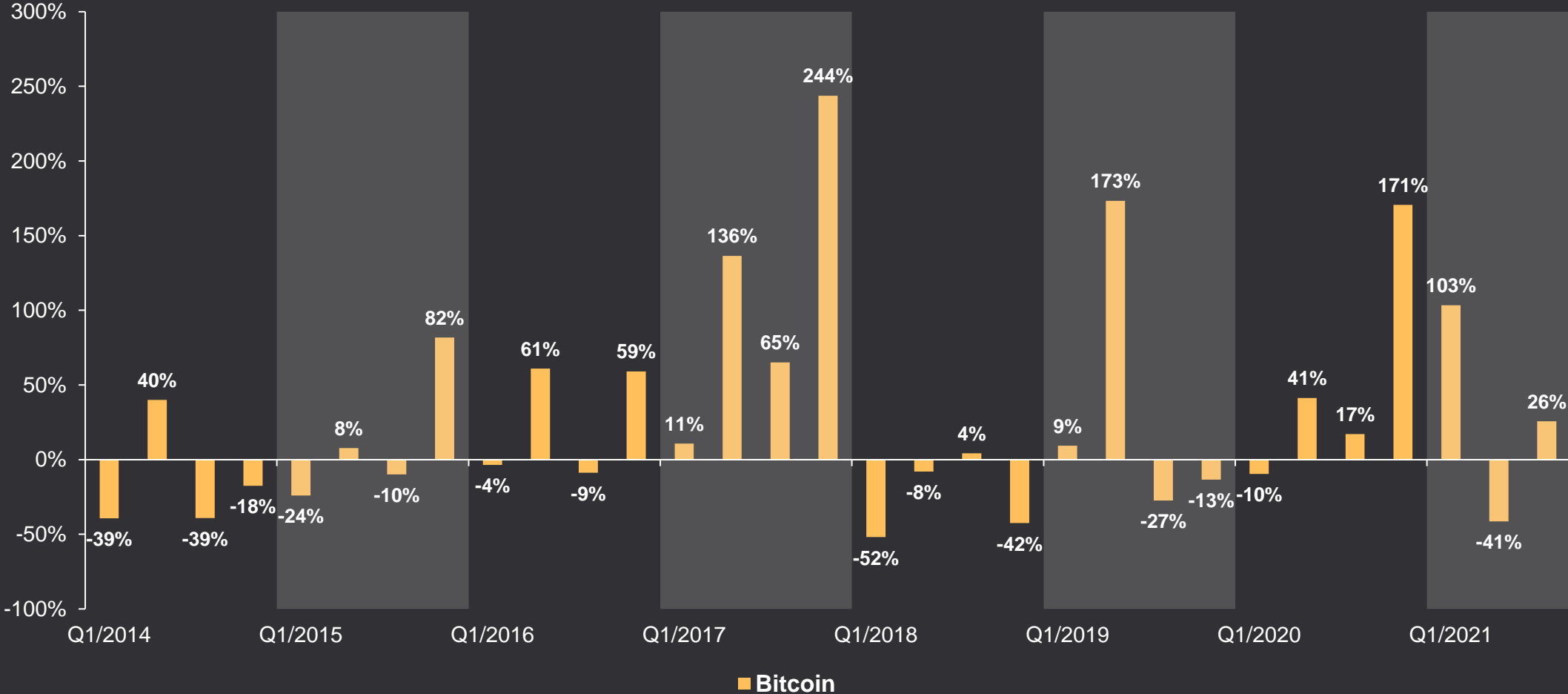
CAGR Comparison, Bitcoin, Gold, and S&P 500, in USD



Source: CaseBitcoin, Reuters Eikon (as of December 10<sup>th</sup> 2021), Incrementum AG

# Terrific Performance Goes Hand in Hand with High Drawdowns

Bitcoin Quarterly Performance, Q1/2014-Q3/2021

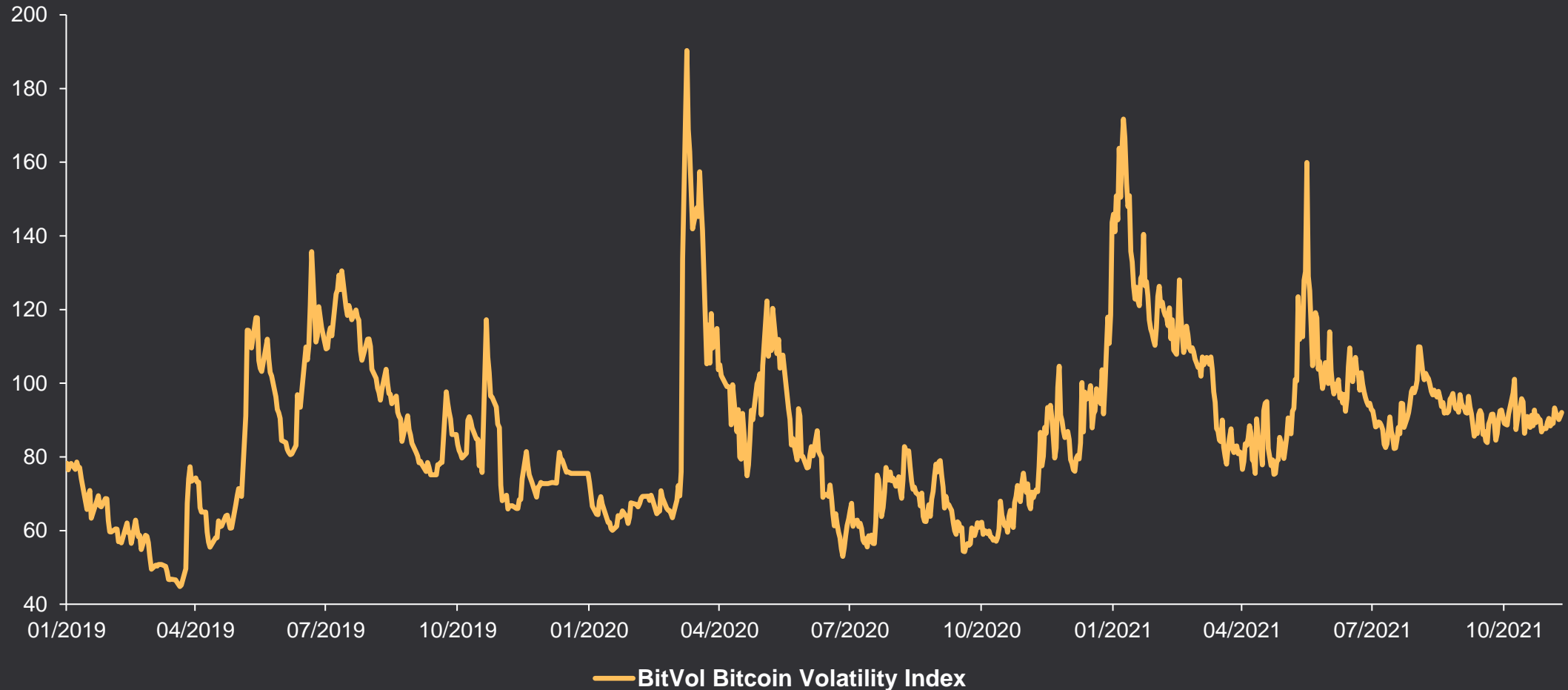


Source: IntoTheBlock, Reuters Eikon, Incrementum AG



# With the Right Strategy, Investors Can Also Benefit from High Volatility – Especially via the Options Markets

BitVol Index\*, 01/2019-11/2021

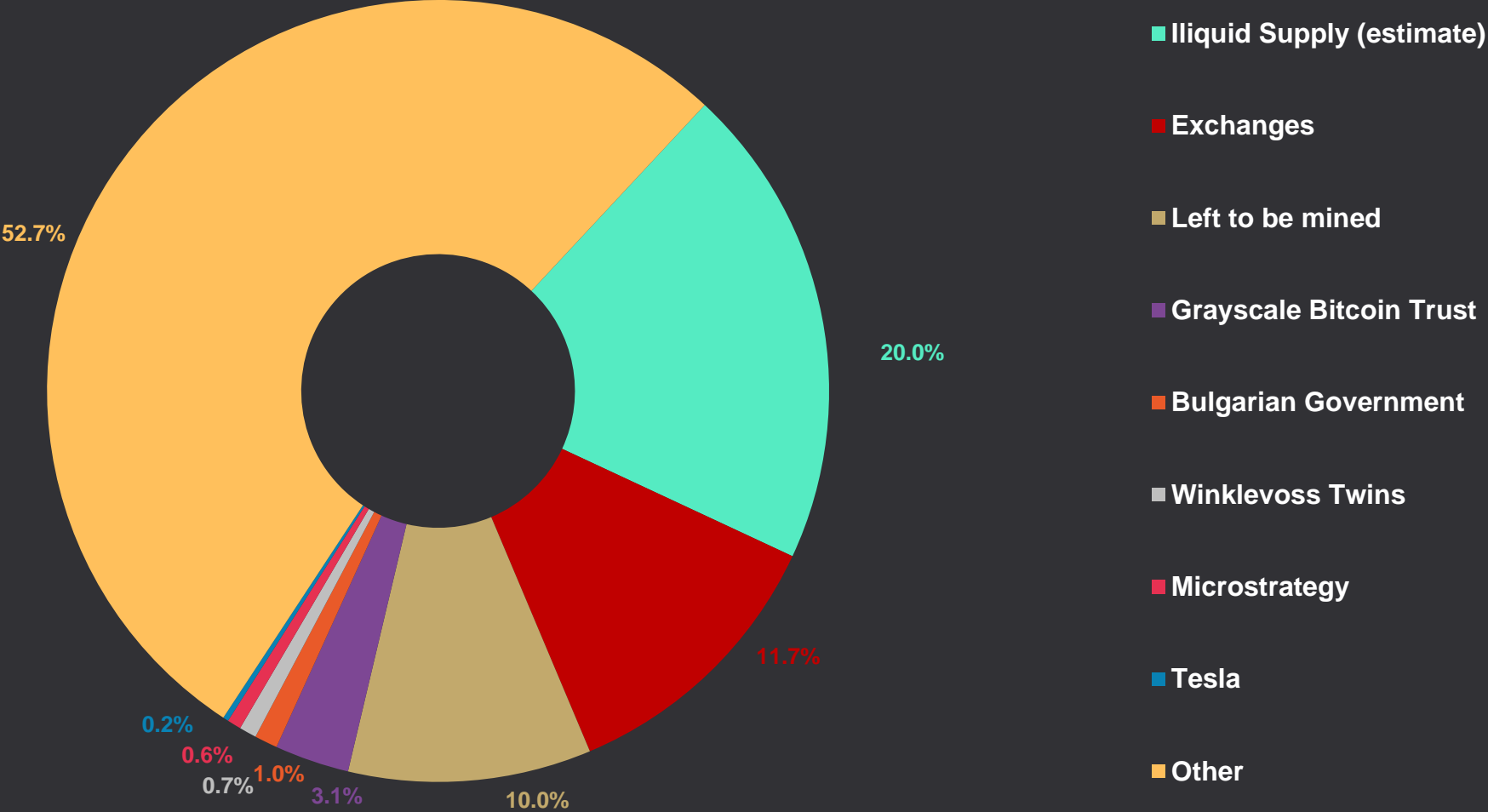


Source: t3index.com, Incrementum AG

\*The BitVol Index measures the expected 30-day implied volatility derived from tradable Bitcoin option prices.

# Who Owns the 21 Million Bitcoin?

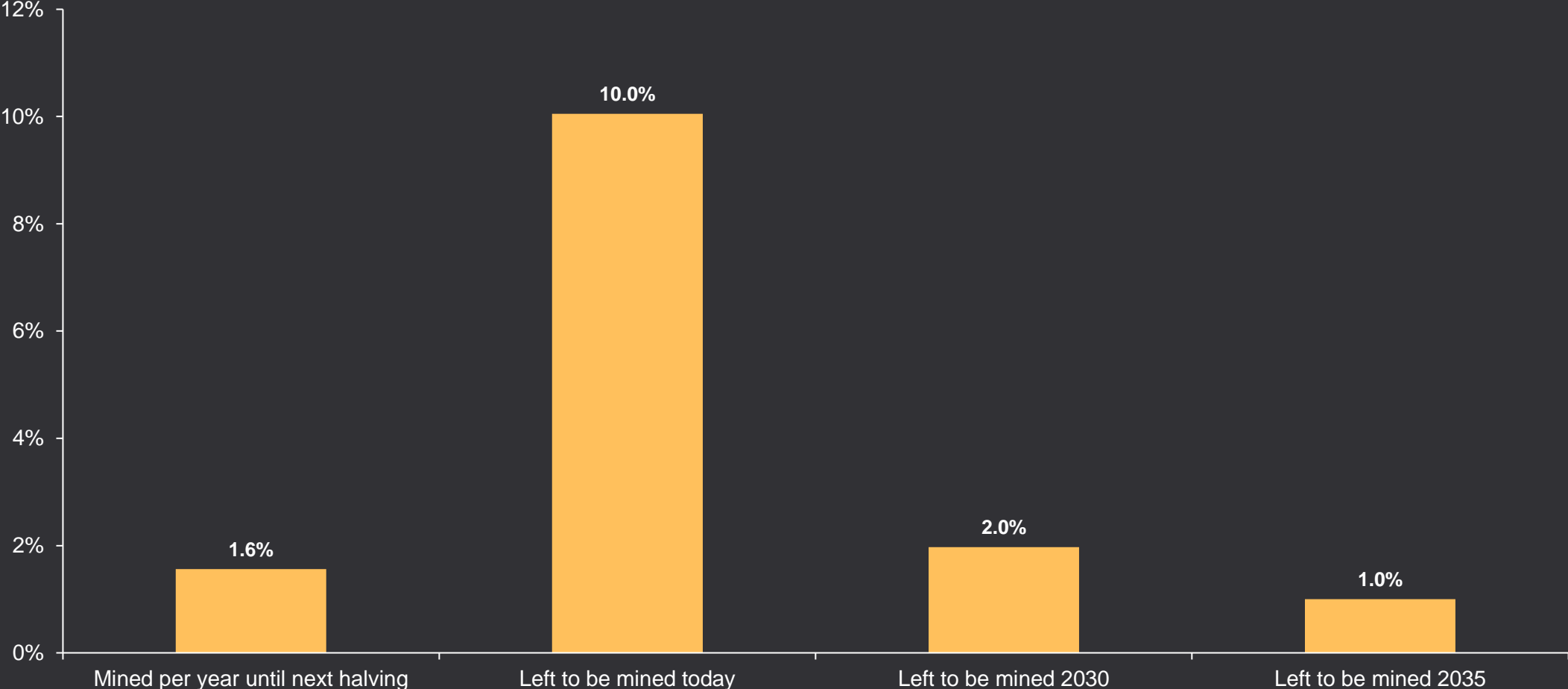
Visualized Bitcoin Supply Put Into Perspective, in % of Total Supply, 12/2021



Source: blockchaincenter.net, buybitcoinworldwide.com, glassnode.com, Incrementum AG

# Bitcoin's Future Supply Is Uniquely Predetermined

The Life Cycle of Bitcoin Mining, in % of Total Supply, 12/2021



Source: glassnode.com, Incrementum AG

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## 2. Digital Gold vs. Physical Gold – Stability Meets Innovation

*“There are certain assets that you want to own to diversify the portfolio, and bitcoin is something like a digital gold.”*

***Ray Dalio***

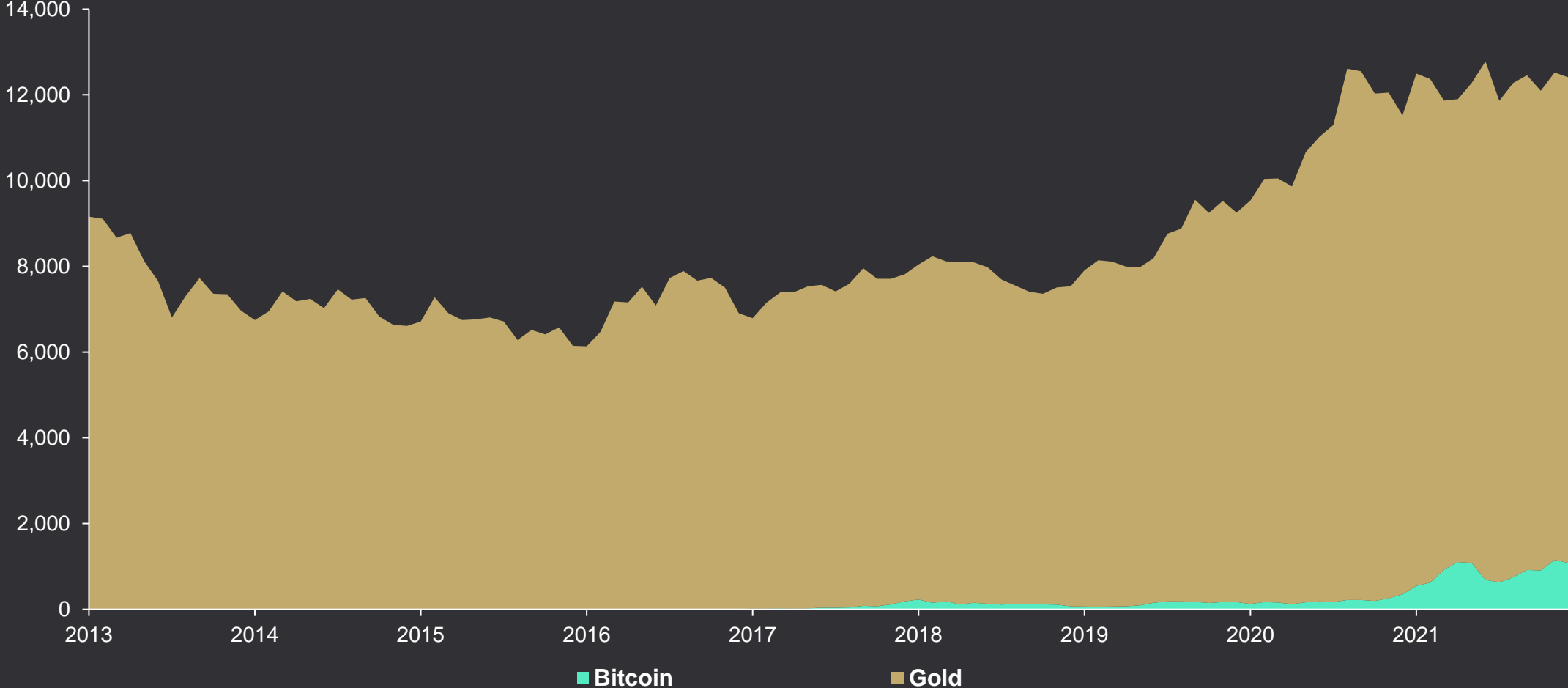
# The Characteristics of Gold, Fiat Currency and Bitcoin

Traits of Money	Gold	Fiat Currency	Bitcoin
Fungibility	Moderate/High	High	High
Portability	Moderate	High	High
Durability	High	Moderate	High
Anonymity	High	Low	Moderate
Security	Moderate	Moderate	High
Non-monetary Utility	High	Low	Low
Scarcity	Moderate/High	Low	High
Decentralization	Moderate	Low	High
Programmability	Low	Low	High
Sovereignty (Government)	Moderate	High	Low
Price Stability	Moderate	High	Low
Energy Intensity for Creation	High	Low	High
Energy Intensity for Maintenance	Low	Moderate	High

Source: 3iQ Research Group, Incrementum AG

# Bitcoin Currently Stands Roughly at 10% of Gold's Market Cap

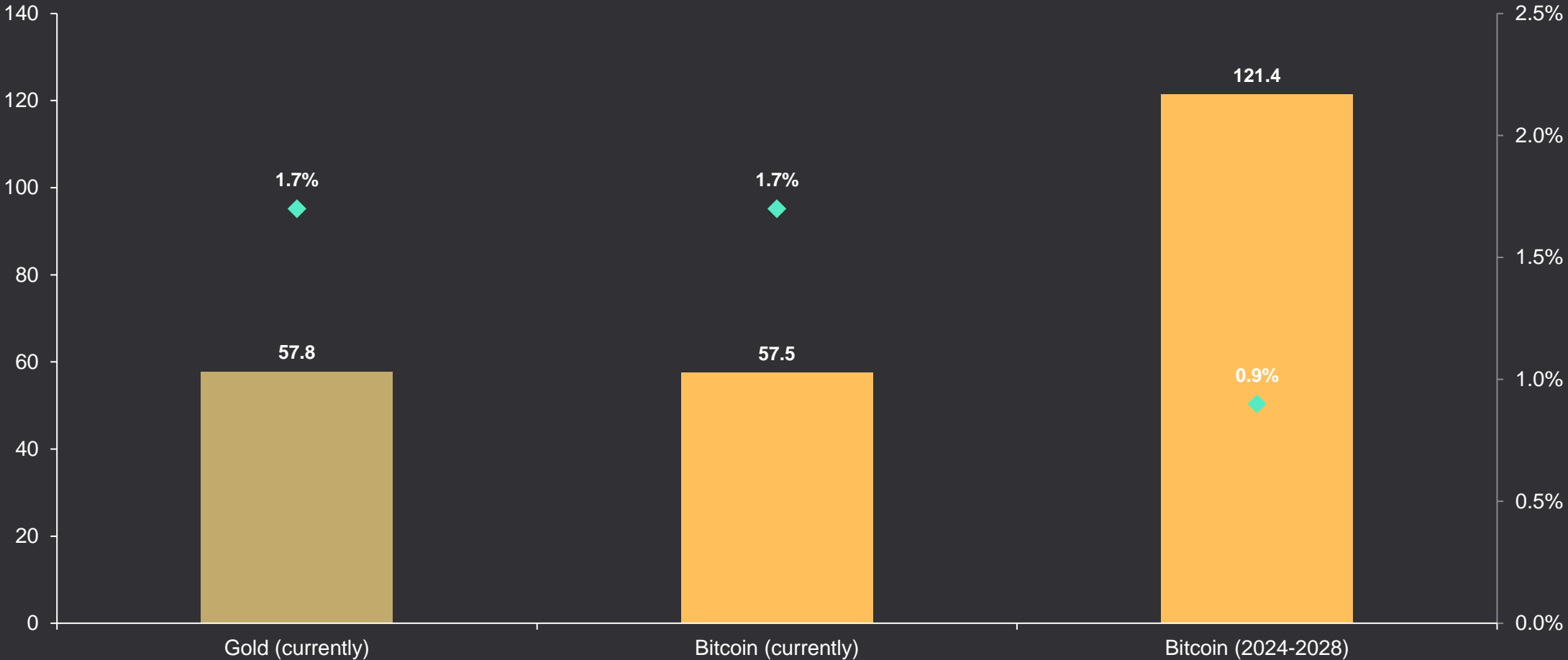
Gold & Bitcoin Market Capitalization, in USD bn, 01/2013-12/2021



Source: Reuters Eikon, World Gold Council, coinmarketcap.com, Incrementum AG

# Gold and Bitcoin Both Feature High Scarcity...

Stock-to-Flow Ratios (lhs) and Respective Inflation Rate (rhs) of Gold and Bitcoin\*

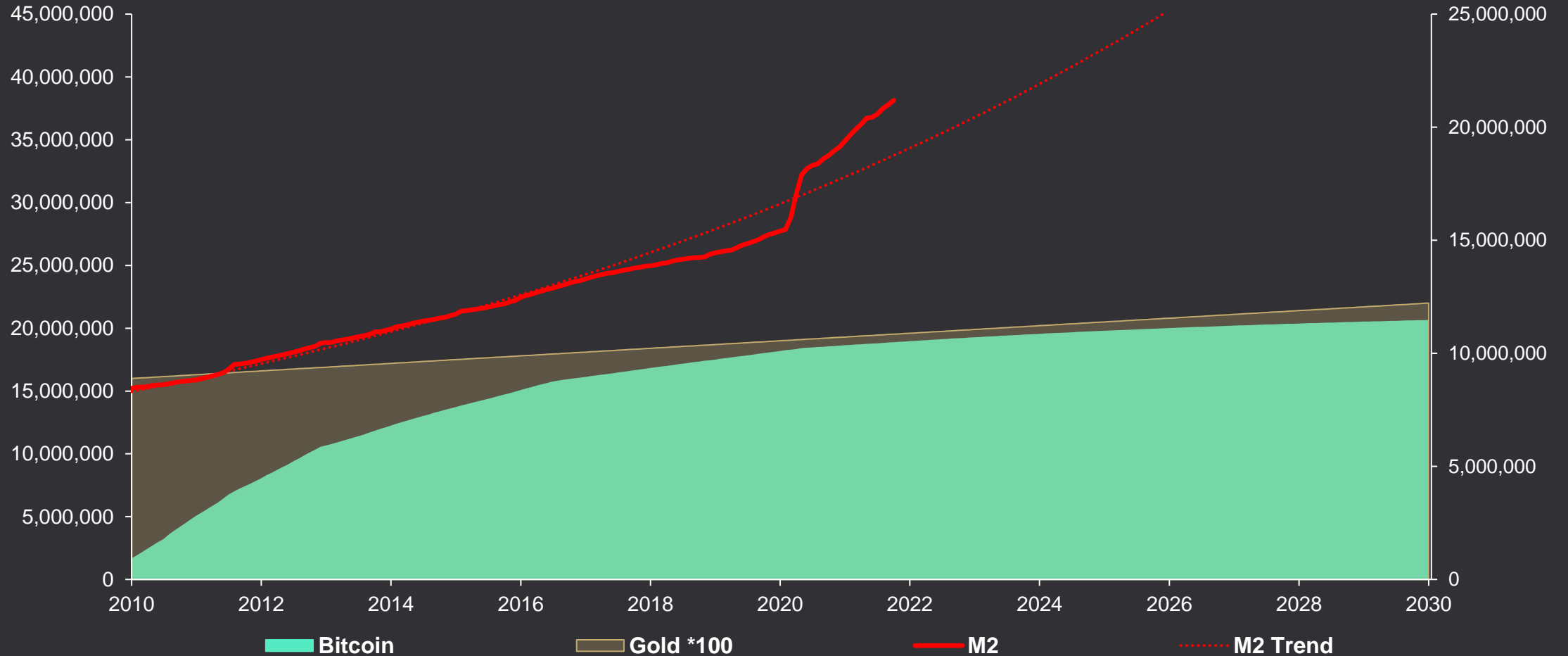


Source: blockchain.com, World Gold Council, Incrementum AG

\*For more information about the stock-to-flow ratio of gold and bitcoin, please see our article [Crypto: Friend or Foe?](#) originating from In Gold We Trust report 2018.

# ... In Other Words, Gold and Bitcoin Are Non-Inflatable

Bitcoin Stock (lhs), in Coins, Gold Stock\*100 (lhs), in Tonnes, and M2 (rhs), in USD mn, 01/2010-01/2030

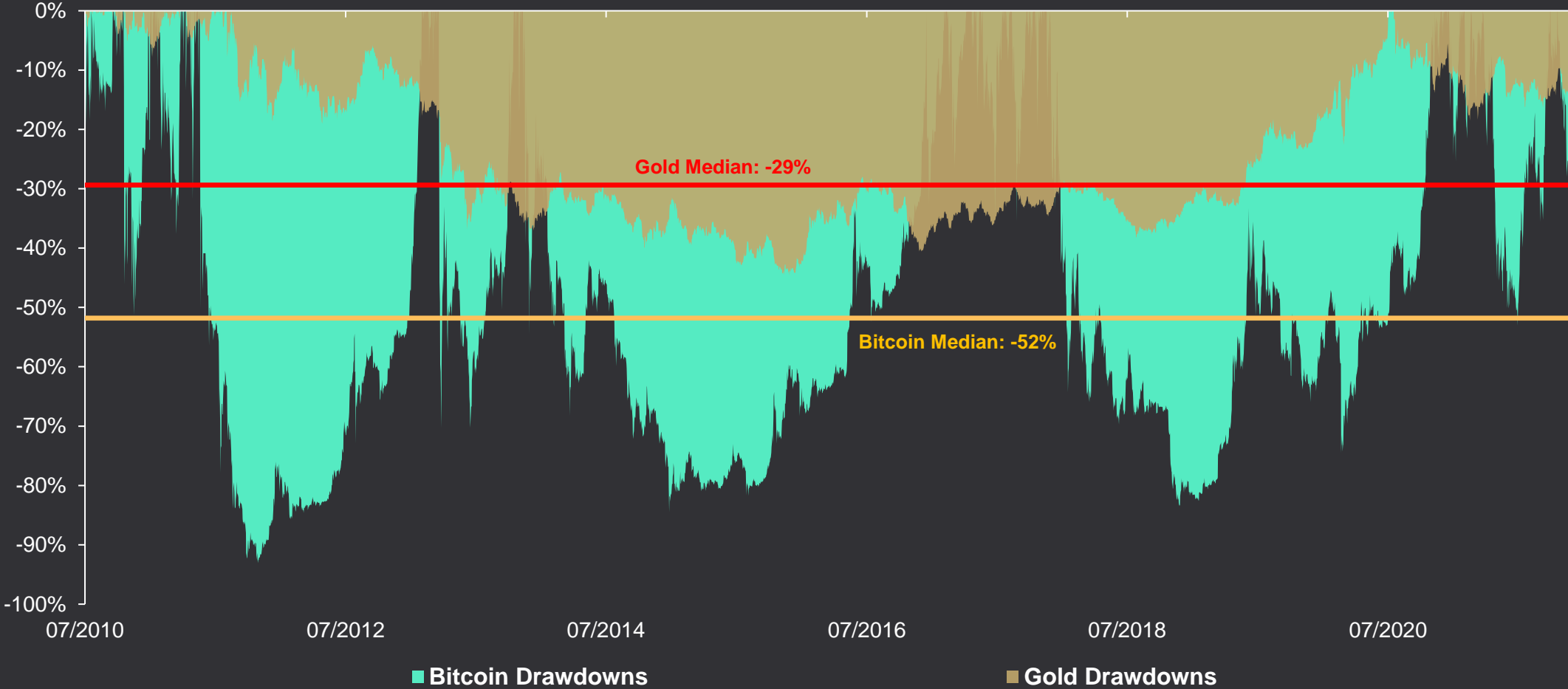


Source: blockchain.com, World Gold Council, Reuters Eikon, Incrementum AG



# Store of Value Characteristics: Bitcoin's Drawdowns Were Severly Higher...

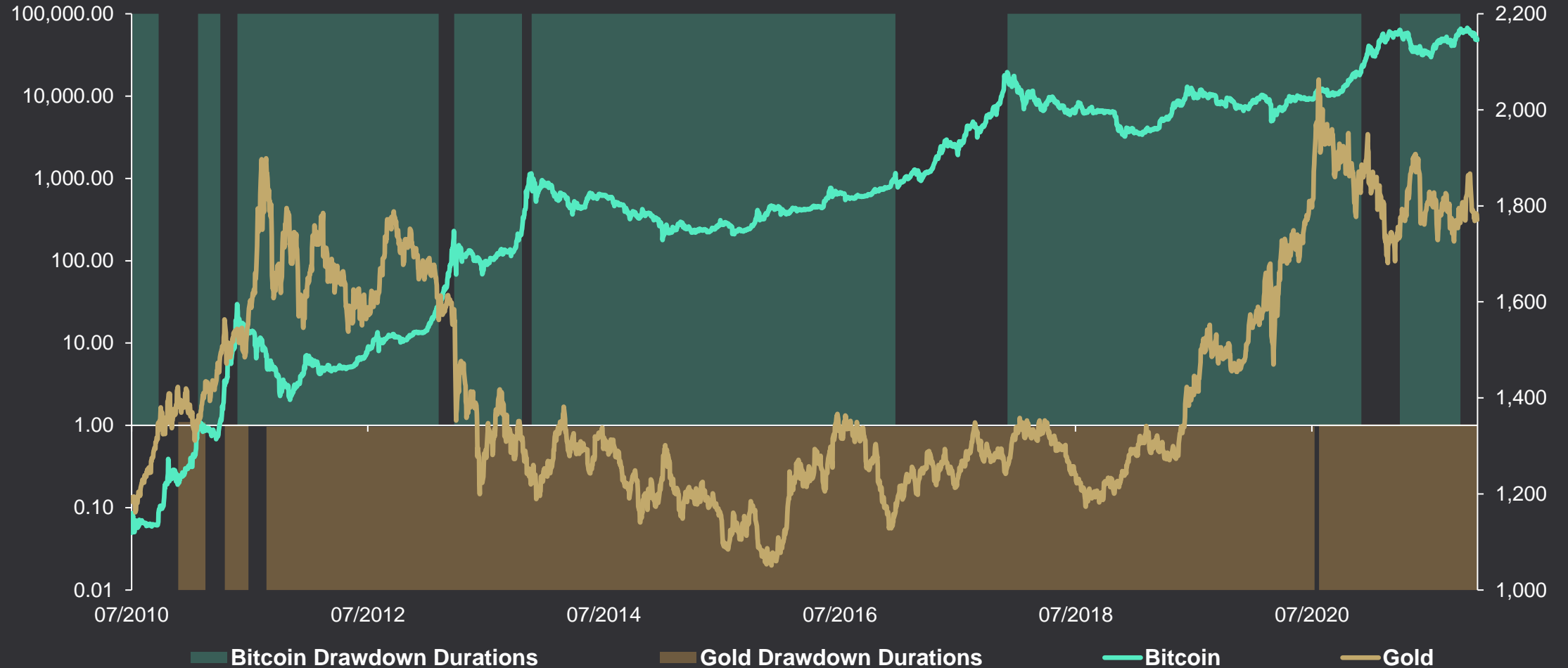
Bitcoin and Gold Drawdowns from ATH, 07/2010-12/2021



Source: Glassnode, Reuters Eikon, Incrementum AG

# ...But the Time to Recovery Was Significantly Shorter So Far

Bitcoin (log, lhs), in USD, and Gold (rhs), in USD, 07/2010-12/2021\*

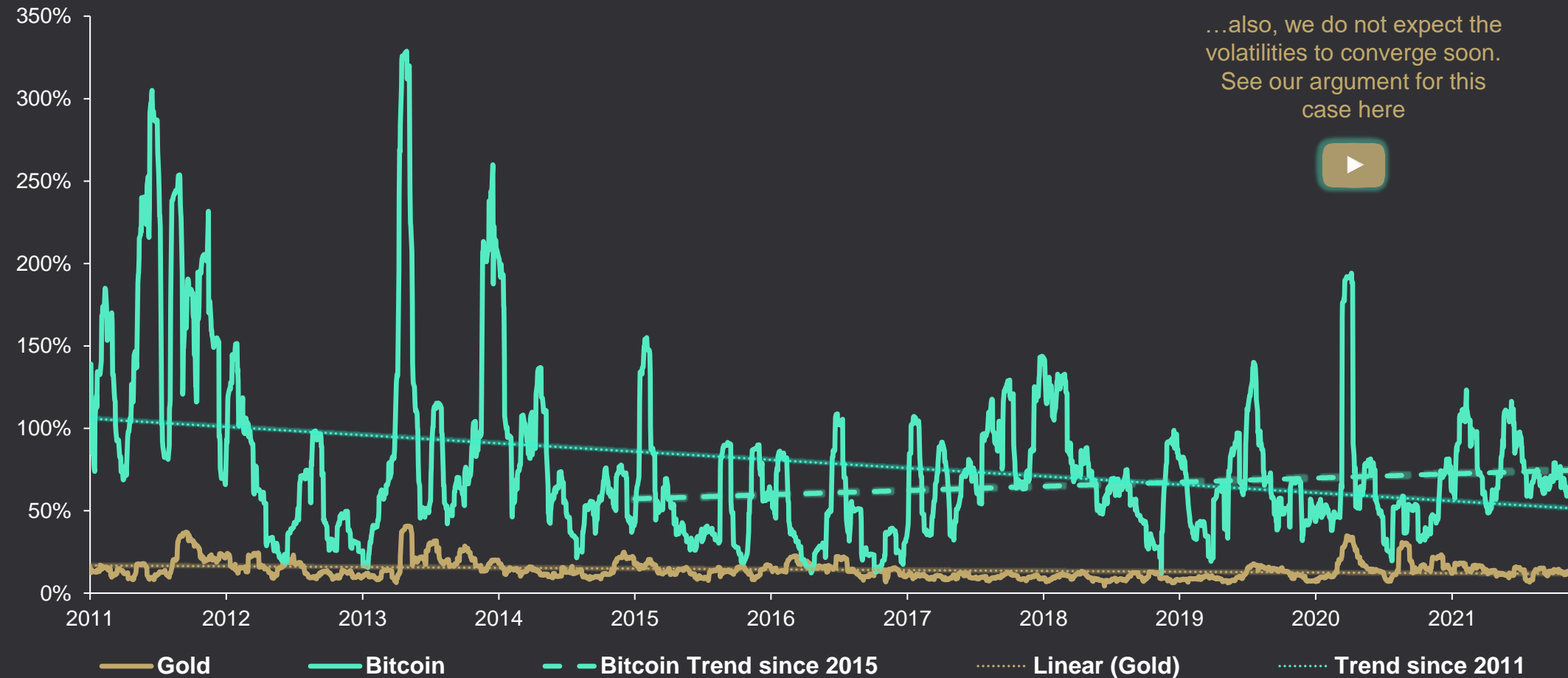


Source: blockchain.com, Reuters Eikon, Incrementum AG

\*Only drawdowns of min. 10 weeks are illustrated

# Despite Bitcoin's Growing Market Cap the Volatilities Have Not Converged Recently

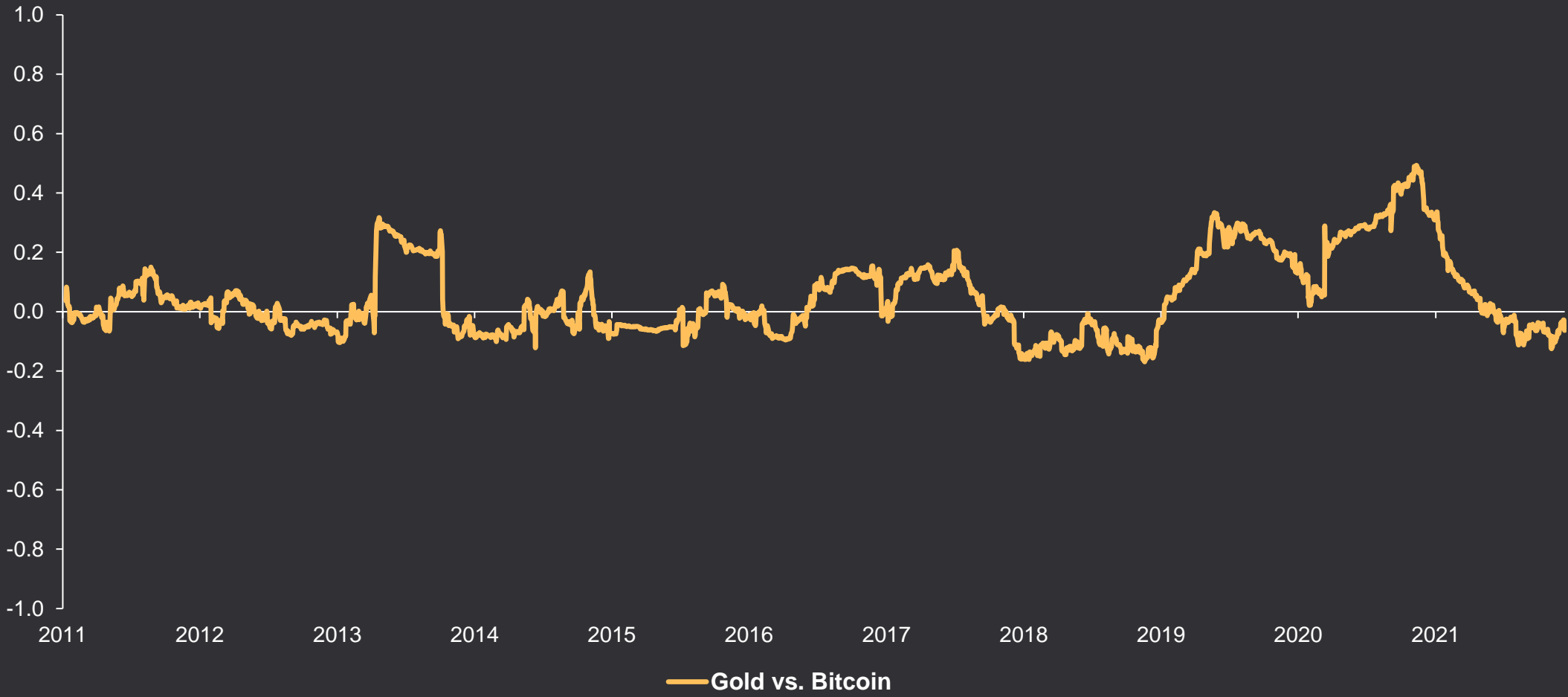
Historical Monthly Annualized Volatility of Gold and Bitcoin, 01/2011-12/2021



Source: blockchain.com, Reuters Eikon, Incrementum AG

# Gold and Bitcoin's Low Correlation Provides a Great Foundation for Combining Both Assets in a Portfolio

Rolling 6-Months Correlation of Gold and Bitcoin, 01/2011-12/2021



Source: blockchain.com, Reuters Eikon, Incrementum AG

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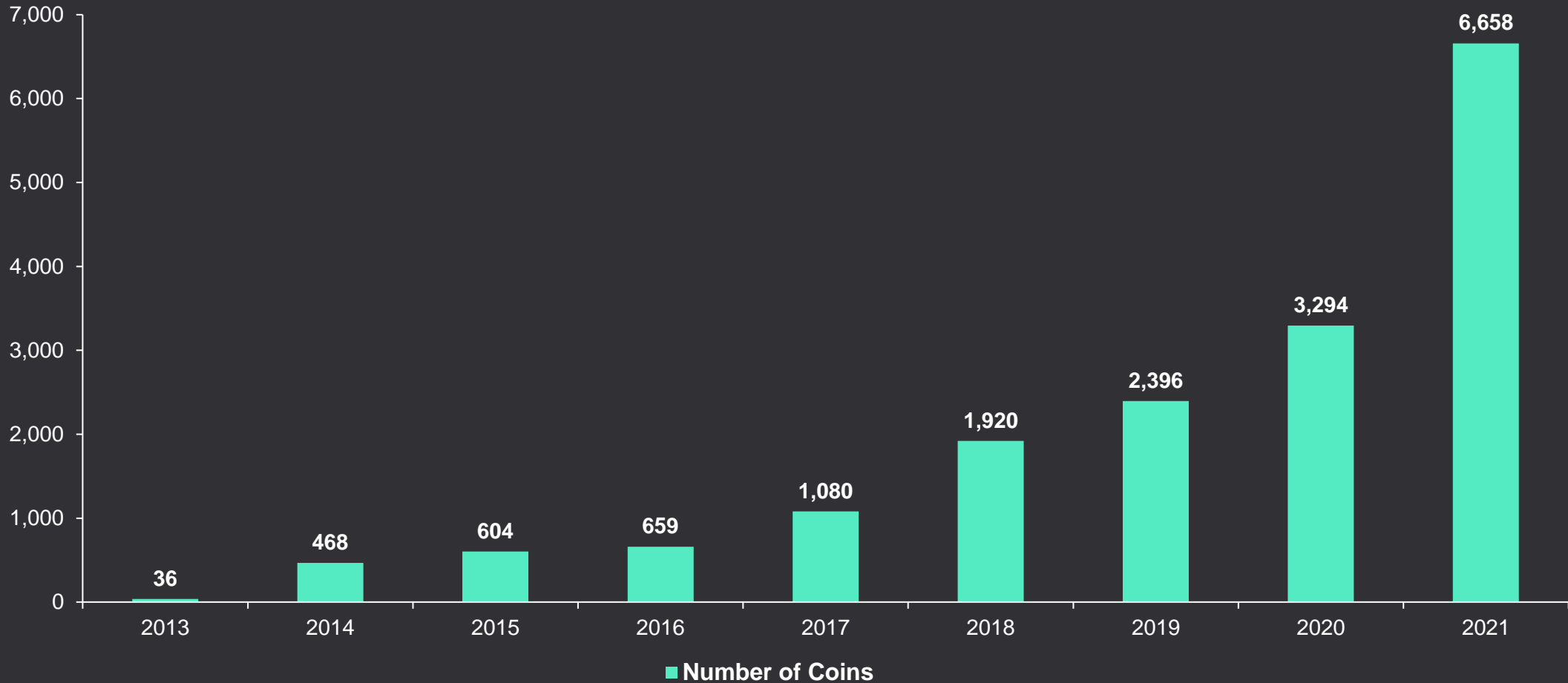
# 3. The Elimination Race of Altcoins and the Role of Bitcoin

*“Wisely, and slow. They stumble that run fast.”*

***William Shakespeare***

# The Crypto Market Is Growing Exponentially. However, Only a Few Coins Will Make It in the Long Run

Number of Coins Listed on Coinmarketcap.com, 09/2013-09/2021



Source: coinmarketcap.com, Incrementum AG

# Although the Market Has Been Flooded with New Coins, the Market Dominance of Bitcoin Remains High

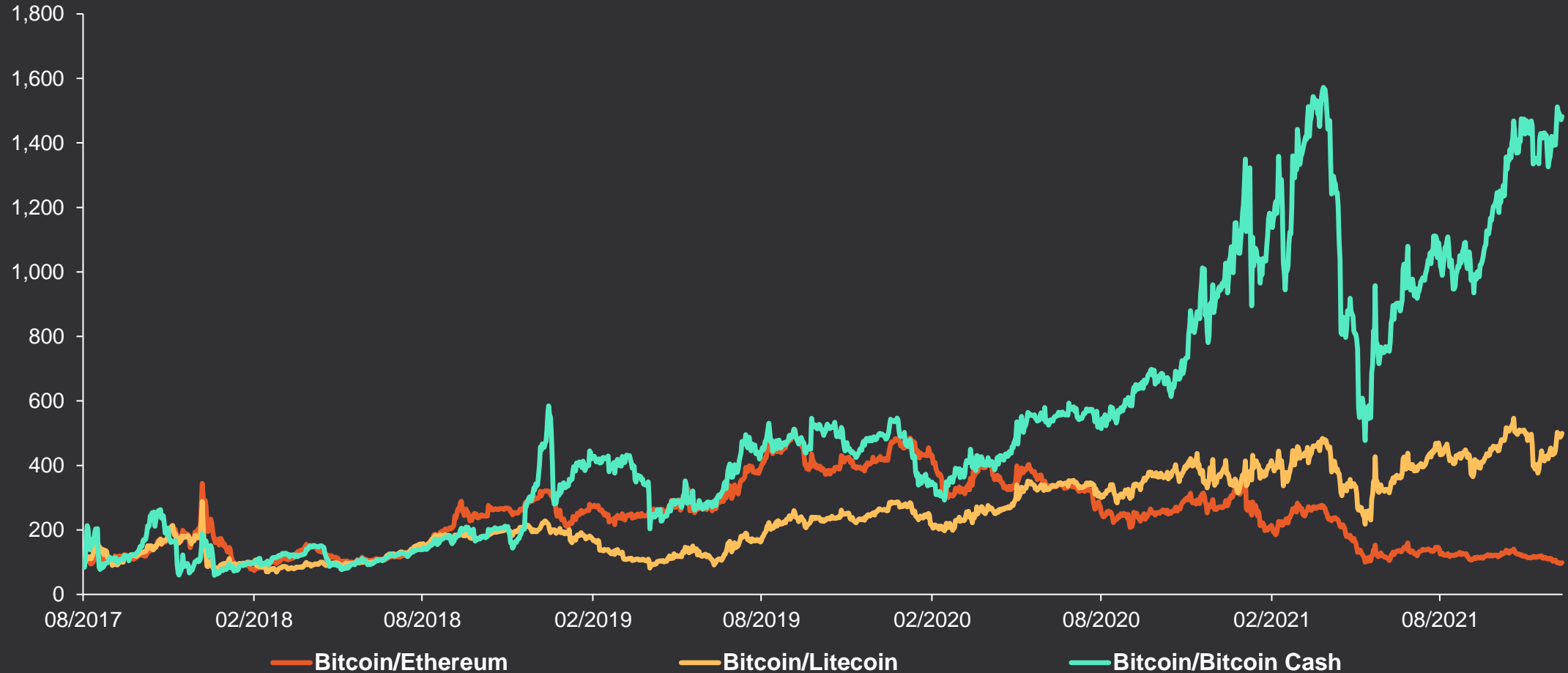
Bitcoin Dominance, 03/2016-12/2021



Source: coinmarketcap.com, Incrementum AG

# In the Long-Term, Bitcoin Outperforms the Majority of Altcoins – Ethereum Has Been One Exception

Bitcoin to Altcoin (Ethereum, Litecoin, Bitcoin Cash) Ratios, 08/2017-12/2021



Source: coinmarketcap.com, Reuters Eikon, Incrementum AG



# One of the Largest Growing Markets in the Crypto Universe Is the NFT Sector, Currently Accounting for Billions of USD per Month

Monthly Volume (Ethereum) on OpenSea (lhs), in USD mn, and Monthly Active Users on OpenSea (rhs), 06/2018-11/2021



Source: Dune Analytics, Incrementum AG

# Cryptos Are Highly Correlated to Each Other, But Uncorrelated to Gold

1-Year Daily Correlation Matrix of Bitcoin, Altcoins and Gold

	BTC	ETH	XRP	LTC	XMR	DOGE	BNB	Gold
BTC	1							
ETH	0.73	1						
XRP	0.44	0.52	1					
LTC	0.80	0.80	0.54	1				
XMR	0.61	0.58	0.47	0.64	1			
DOGE	0.41	0.42	0.31	0.42	0.26	1		
BNB	0.59	0.59	0.49	0.62	0.61	0.26	1	
Gold	0.09	0.12	0.05	0.15	0.06	0.10	0.10	1

Source: Blockchaincenter.net (as of December 10<sup>th</sup> 2021), Incrementum AG

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# 4. Quo Vadis, Bitcoin?



**PlanB** @100trillionUSD · 10. Dez. ...

I don't think \$69K was the top for this halving cycle.  
If \$69K were the top, than a typical bear market -80% drawdown would bring the bottom to \$14K .. below 2017 ATH (\$20K) and below 200WMA (\$18K). Nah, that has never happened and IMO will never happen.

Source: Twitter

# According to the Long-Term Power Law Corridor Growth Model a Target Price Above USD 130,000 Could Be in the Cards

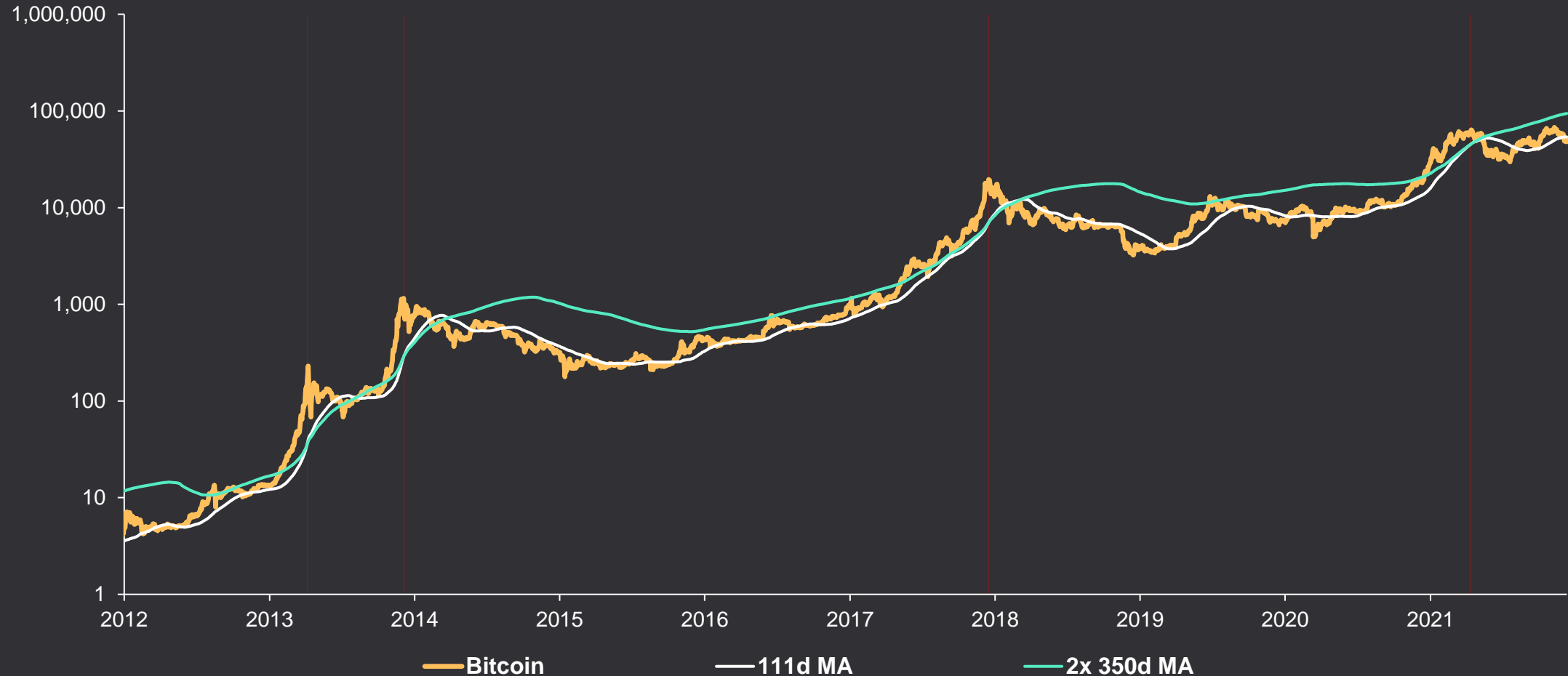
The Long-Term Power Law Corridor Growth of Bitcoin (log), in USD, 01/2011-12/2021



Source: Harold Christopher Burger, coinmarketcap.com, Incrementum AG

# The Current Bull Market Cycle Looks More Like the Bull Market in 2013 Heading Towards a Second Intercept of the Pi Cycle Top Indicator

Pi Cycle Top Indicator\*, 01/2012-12/2021

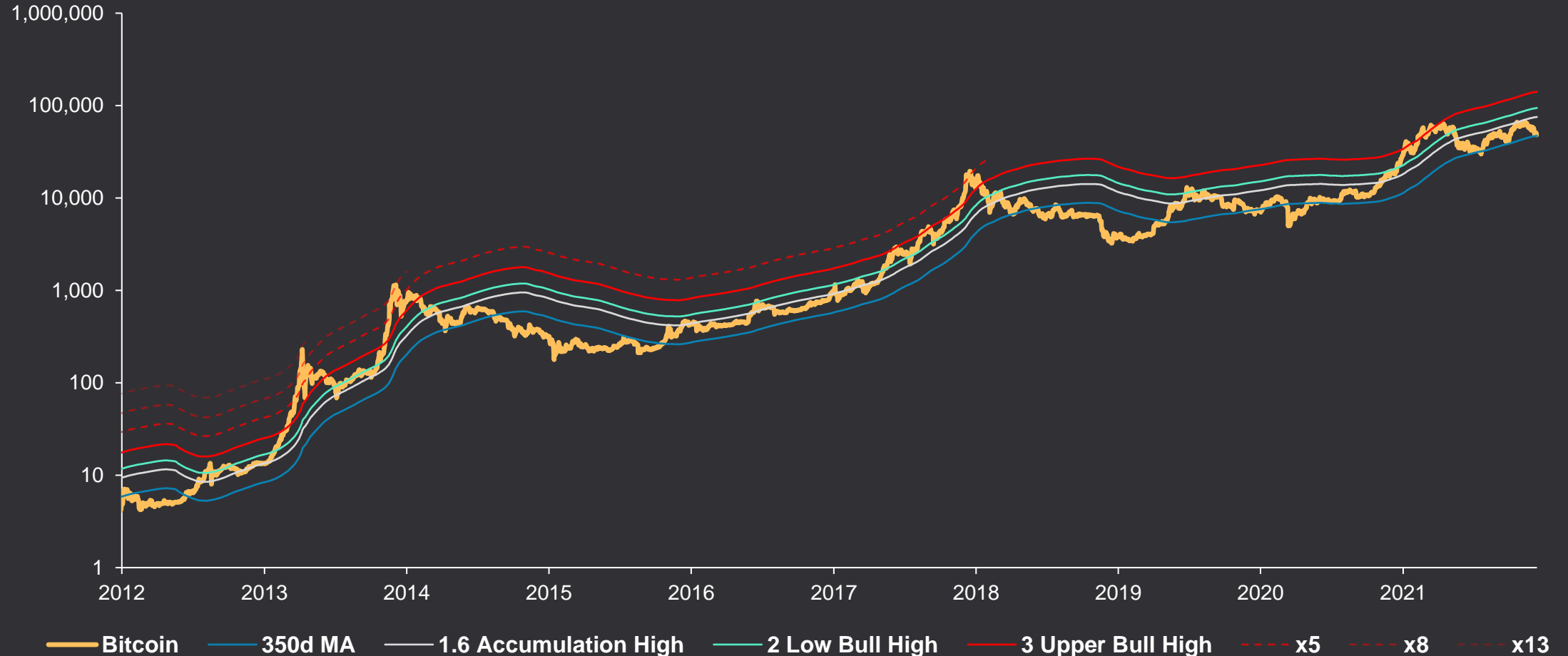


Source: lookintobitcoin.com, coinmarketcap.com, Incrementum AG

\*The indicator has historically shown favorable sell prices of Bitcoin once the shorter-term MA (111d) has crossed the 2x longer-term MA (350d). It is named "Pi" Cycle Top Indicator because the ratio of 350/111 is very close to Pi.

# Also the Golden Ratio Multiplier Is Currently Showing Further Upside Potential for Bitcoin

Golden Ratio Multiplier\*, 01/2012-12/2021

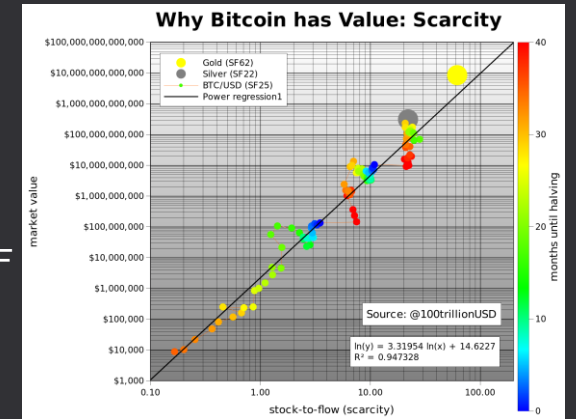


Source: lookintobitcoin.com, coinmarketcap.com, Incrementum AG

\*The Golden Ratio Multiplier shows a decreasing Fibonacci sequence pattern of the 350d MA hitting Bitcoin highs.

# The S2F Model Has Been the Most Accurate Statistical Model Explaining Bitcoin's Price Movements So Far...

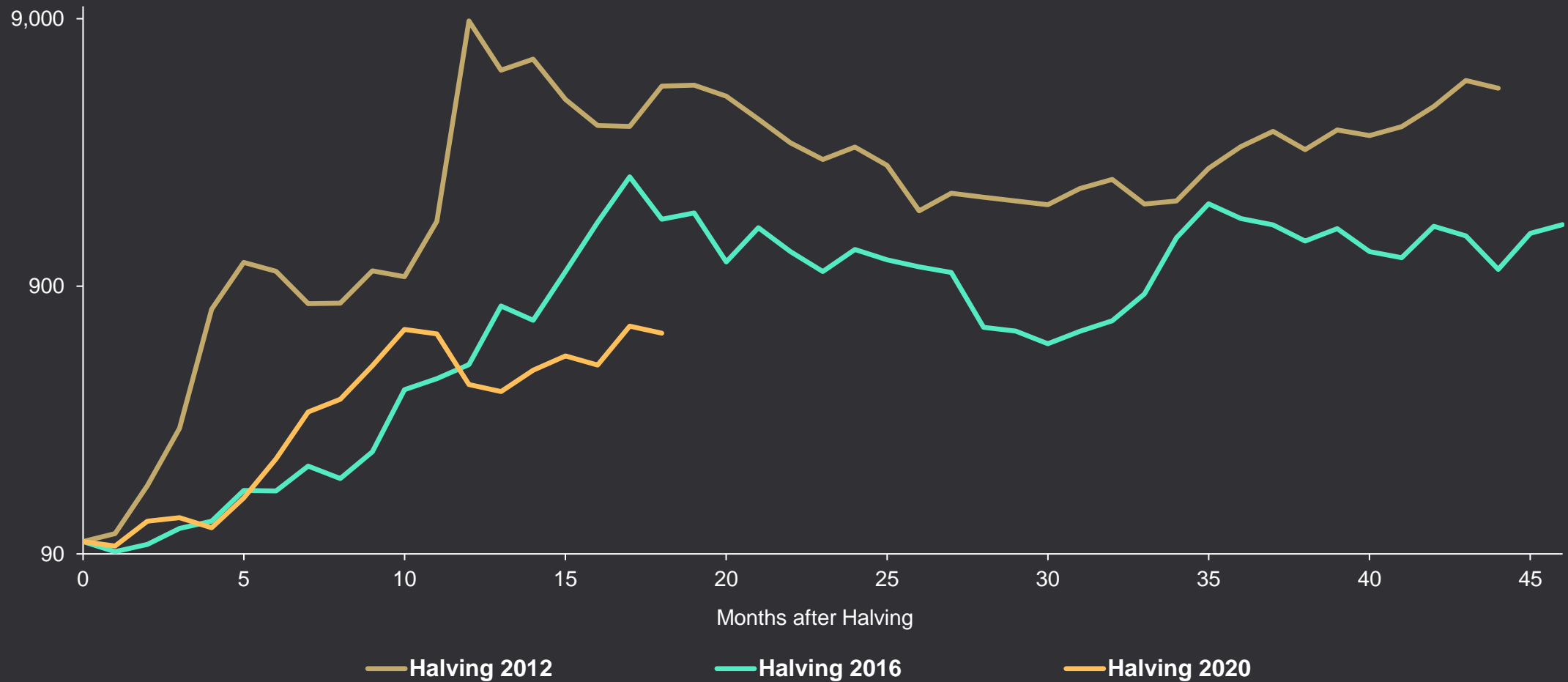
S2F Model Price, and Bitcoin Price, in USD, 01/2010-12/2026



Source: PlanB @100trillionUSD, Glassnode, Reuters Eikon, Incrementum AG

# The Most Pressing Question Currently: Is This Halving Cycle Delayed, Over or Broken?

Bitcoin Performance after Halvings (Halving Month = 100, log)

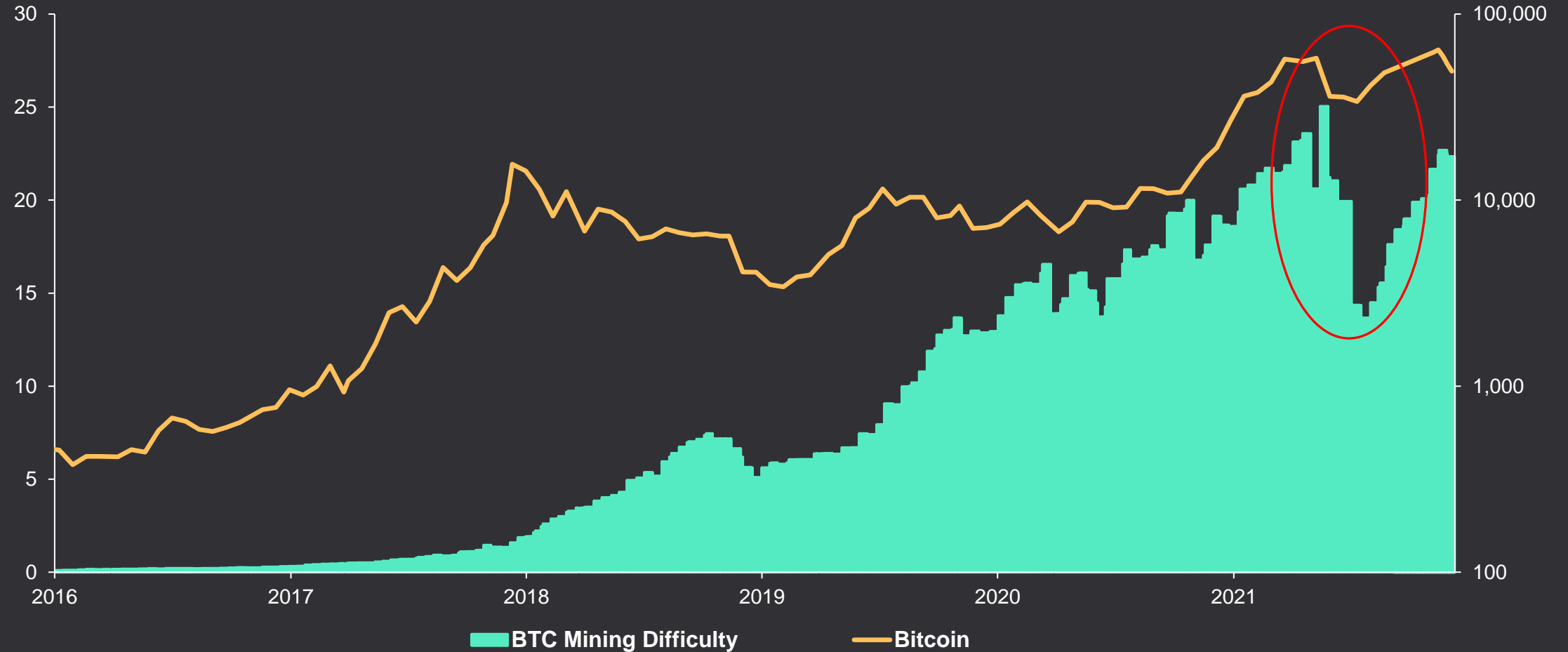


Source: Reuters Eikon, coinmarketcap.com, Incrementum AG



# The Chinese Mining Ban May Have Severely Influenced Bitcoin's Halving Cycle Run. This Could Lead to a Delayed Halving Cycle Peak

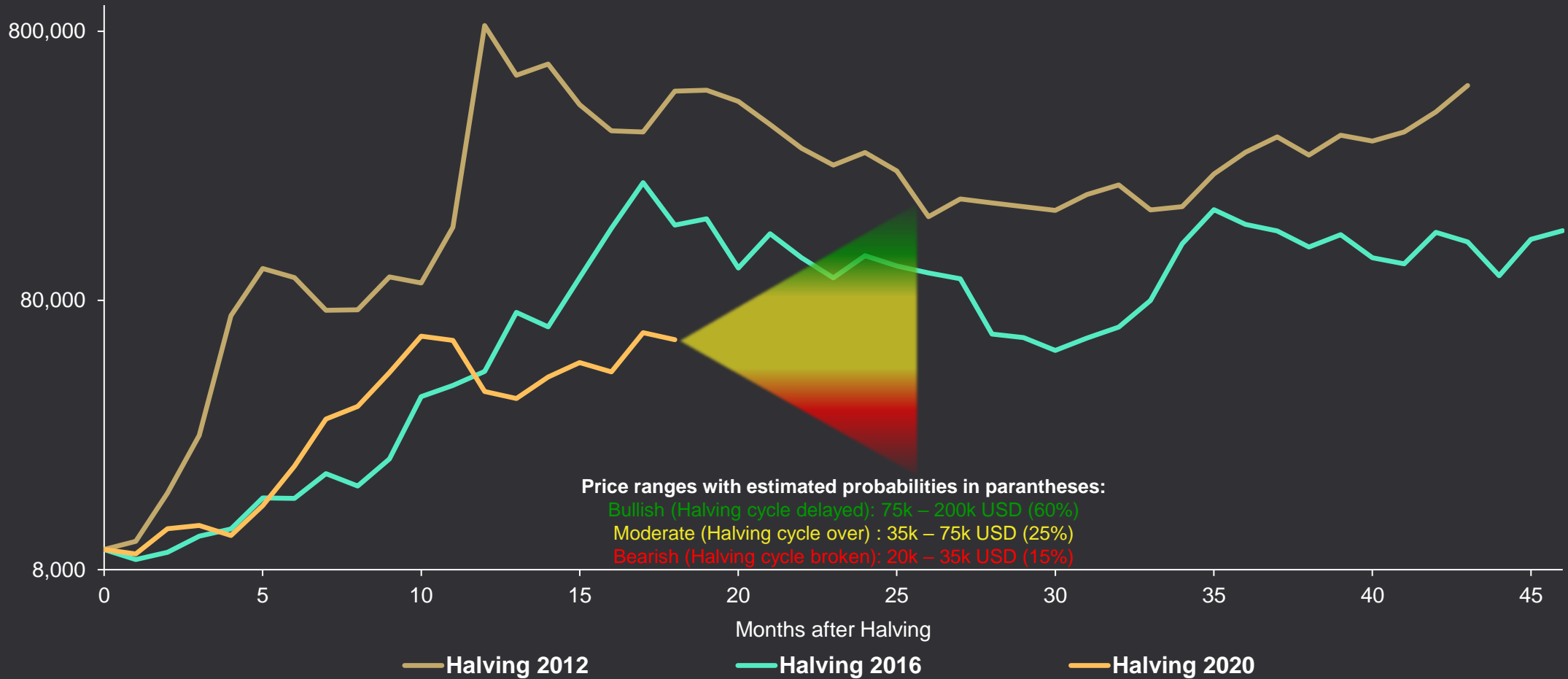
Bitcoin Mining Difficulty (lhs), in trn, and Bitcoin (log, rhs), in USD, 01/2016-12/2021



Source: blockchain.com, Reuters Eikon, Incrementum AG

# We Have Formulated 3 Scenarios for the Current Halving Cycle

Bitcoin Performance after Halvings (indexed to 2020 Halving Month Close of 9,508 USD, log)



Source: Reuters Eikon, coinmarketcap.com, Incrementum AG

# In Our Opinion the Most Likely Scenario Is a Delayed Peak in This Halving Cycle

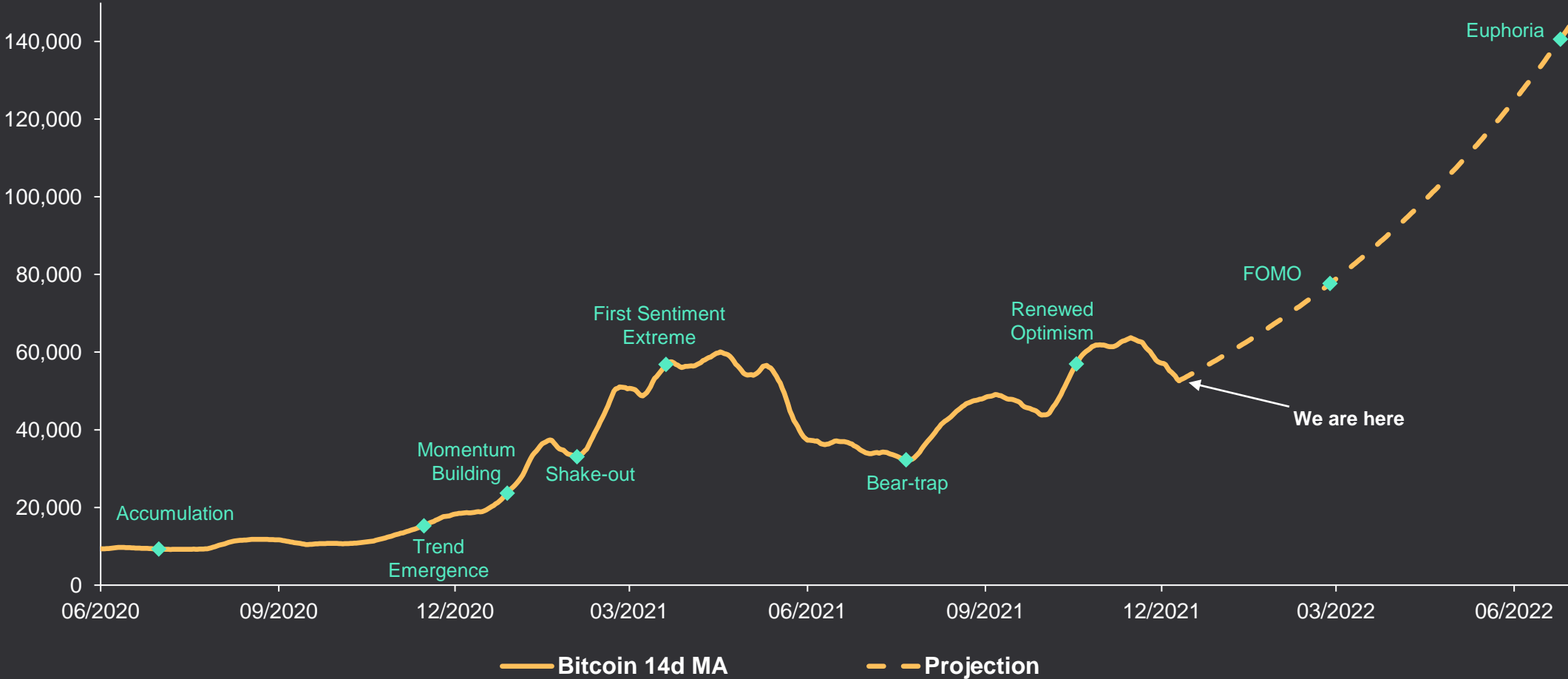
Bitcoin (log), in USD, 01/2015-12/2021



Source: Reuters Eikon, Incrementum AG

# In This Scenario We Could Experience *FOMO* or Even *Euphoria* in 2022

Bull Market Cycle, Bitcoin 14d MA and Projection, 06/2020-06/2022



Source: IG Group, Reuters Eikon, Incrementum AG

# Summary

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1. Due to its unusual investment characteristics in terms of performance, correlation and volatility, **Bitcoin (and selected altcoins) can serve as useful supplement within a diversified portfolio.**
2. Gold and Bitcoin are non-inflatable and as such profit from monetary inflation. **Together they shine even brighter due to a superior risk/return profile.** We are convinced that an increasing number of investors will treat **Gold and Bitcoin as parts of one non-inflatable asset class.**
3. **Most altcoins are not here to stay.** However, some projects have the potential to serve as market disruptors and substantially change aspects in our lives. Conceptionally, **we consider (most) altcoins more like venture capital investments, whereas Bitcoin to us is digital Gold.**
4. **Various indicators are signaling a bullish environment for Bitcoin.** However, the most relevant model to monitor is the S2F model by PlanB. In this regard, it is our opinion that the current halving cycle is not over yet. Our base scenario is a **delayed peak in this cycle.** If this assumption is correct, we could see the Bitcoin price pushing **above USD 100,000 in the coming months.**

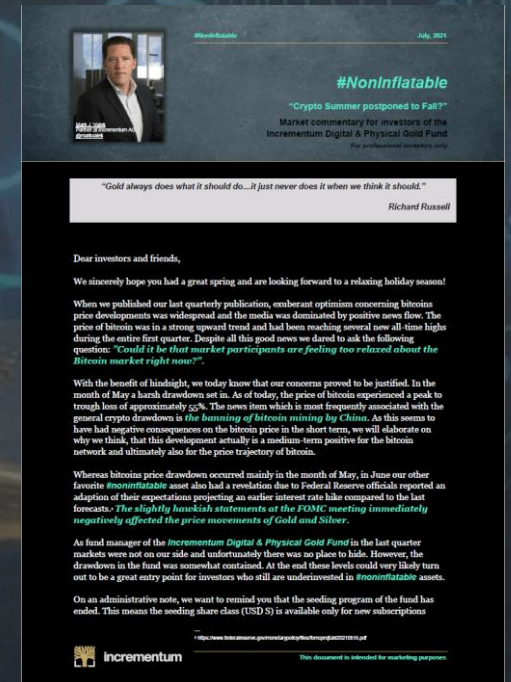
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**Subscribe** to our quarterly report **#NonInflatable**, where we will explain more about the dynamics of this halving cycle in the upcoming Q4 edition! On top of that, we regularly cover the most recent topics of interest in the crypto universe!!!



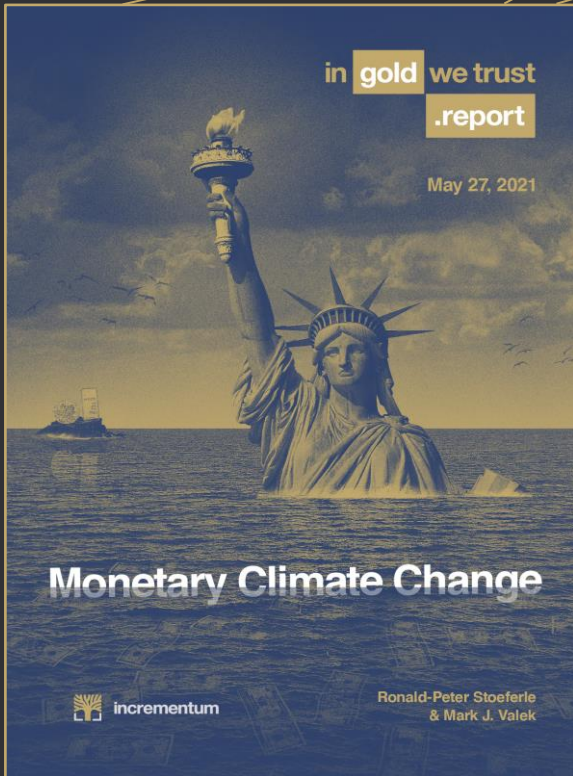
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About the Future.*

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# About the Authors

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## Mark J. Valek

Mark is a partner at Incrementum AG, responsible for portfolio management and research. His passion is to apply interdisciplinary thinking in the field of asset management. In particular, he is fascinated by the Austrian School of Economics, monetary history and the foreseeable paradigm shift in the global monetary order.

While working, Mark studied business administration at the Vienna University of Economics and Business Administration and has been working continuously in the areas of financial markets and asset management since 1999.

Prior to founding Incrementum AG, he worked for Raiffeisen Capital Management for ten years, most recently as a fund manager in the area of inflation protection and alternative investments. He gained entrepreneurial experience as co-founder of Philoro Edelmetalle GmbH.

Since 2013, he has been a lecturer at Scholarium in Vienna as well as a lecturer at the Vienna Stock Exchange Academy. In 2014 he published the book *Austrian School for Investors*. Mark is married and the proud father of a son. He likes to balance his work life by playing basketball.

## Ronald-Peter Stöferle

Ronnie is Managing Partner of Incrementum AG and responsible for research and portfolio management. He studied Business Administration and Finance in the USA and at the "Wirtschaftsuniversität Wien" and gained practical experience at the trading desk of a bank during his studies.

After graduating, he worked in research at Erste Group, where he first published the In Gold We Trust report in 2007, which over the years became a standard publication on gold, money and inflation.

Since 2013 he has been a lecturer at the Scholarium in Vienna as well as a lecturer at the Wiener Börse Akademie. In 2014 he published the book *Austrian School for Investors* and in 2019 *The Zero Interest Trap*.

He is also a board member of Tudor Gold, a Canadian exploration company with projects in the legendary Golden Triangle (British Columbia), and a member of the advisory board of the emerging junior explorer Affinity Metals (AFF). He also serves as a consultant to Matterhorn Asset Management, a global leader in asset preservation in the form of physical gold stored outside the banking system.

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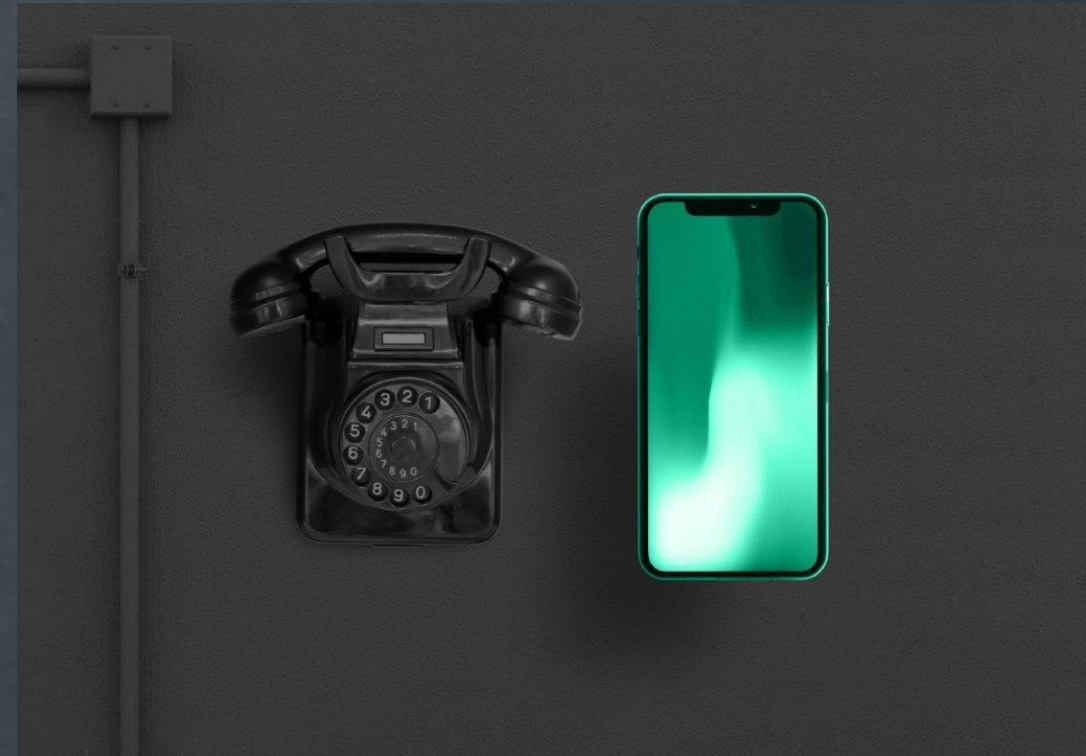
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  - Crypto and alternative currency exposure
  - Special mandates

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