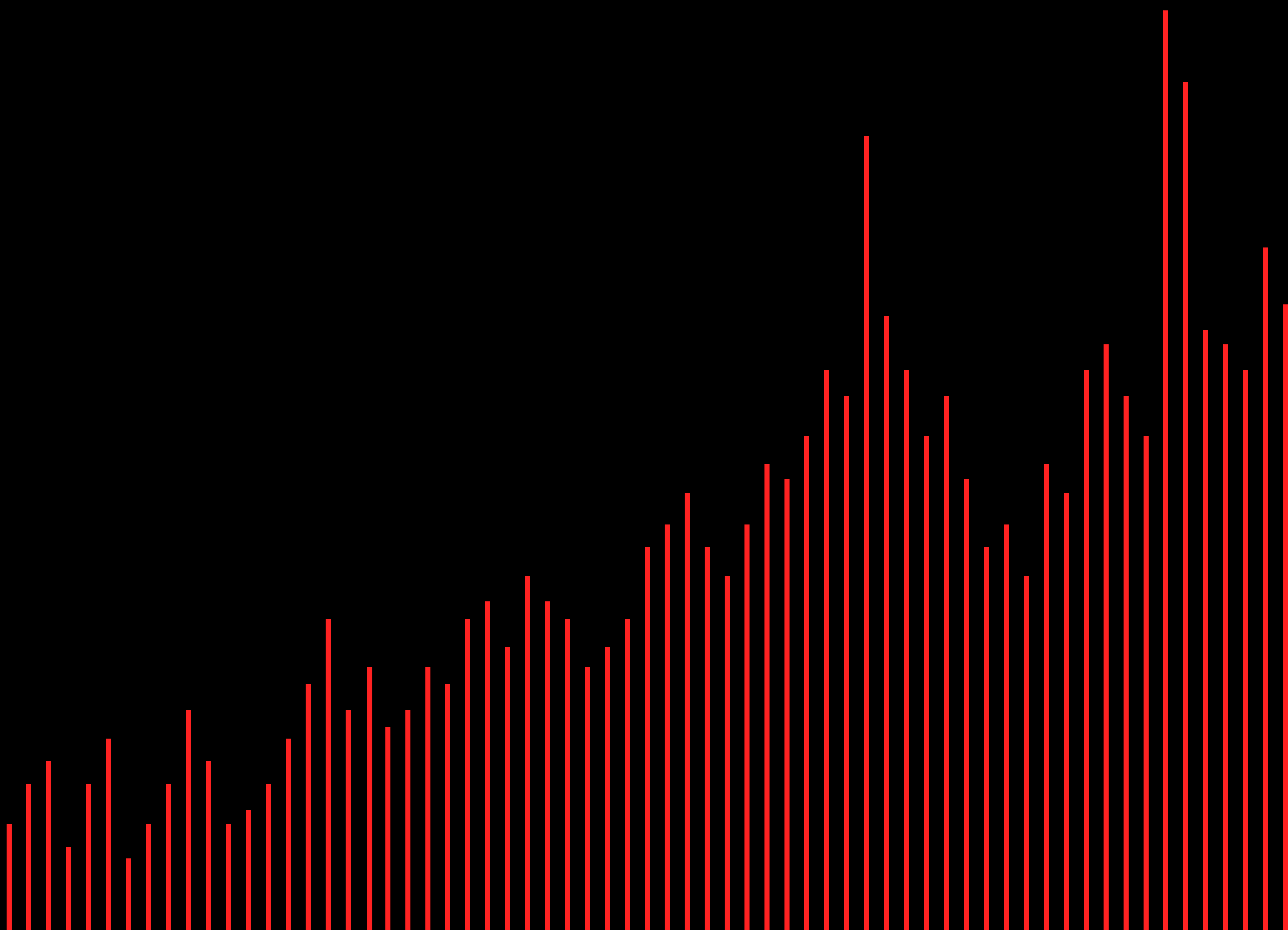


THE MARKET COMPASS

MONTHLY

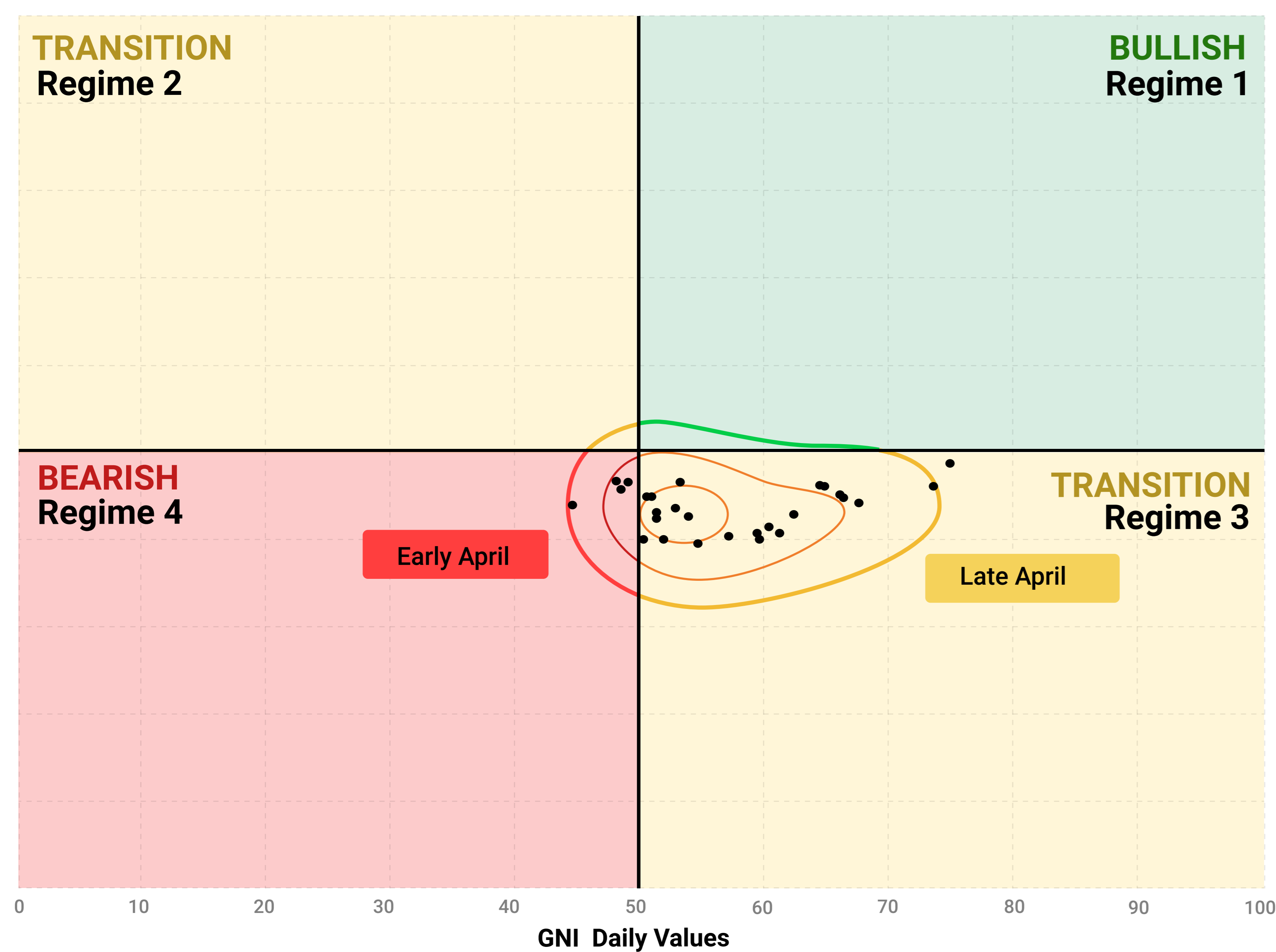
April 2020



KEY TAKEAWAYS

This issue of The Market Compass Monthly provides a thorough overview of Bitcoin development during the month of April. We first provide an assessment of the ecosystem's aggregate state by analysing the behaviour of *GNI* and its subcomponents, before combining this information with price trends and identifying the current regime. At the end, we provide a Deep Dive into the subconstituents of *GNI* and analyse their behaviour in April and especially their individual recoveries after the major price drop in mid March.

The GN Compass



PART 1: THE MONTH IN NUMBERS

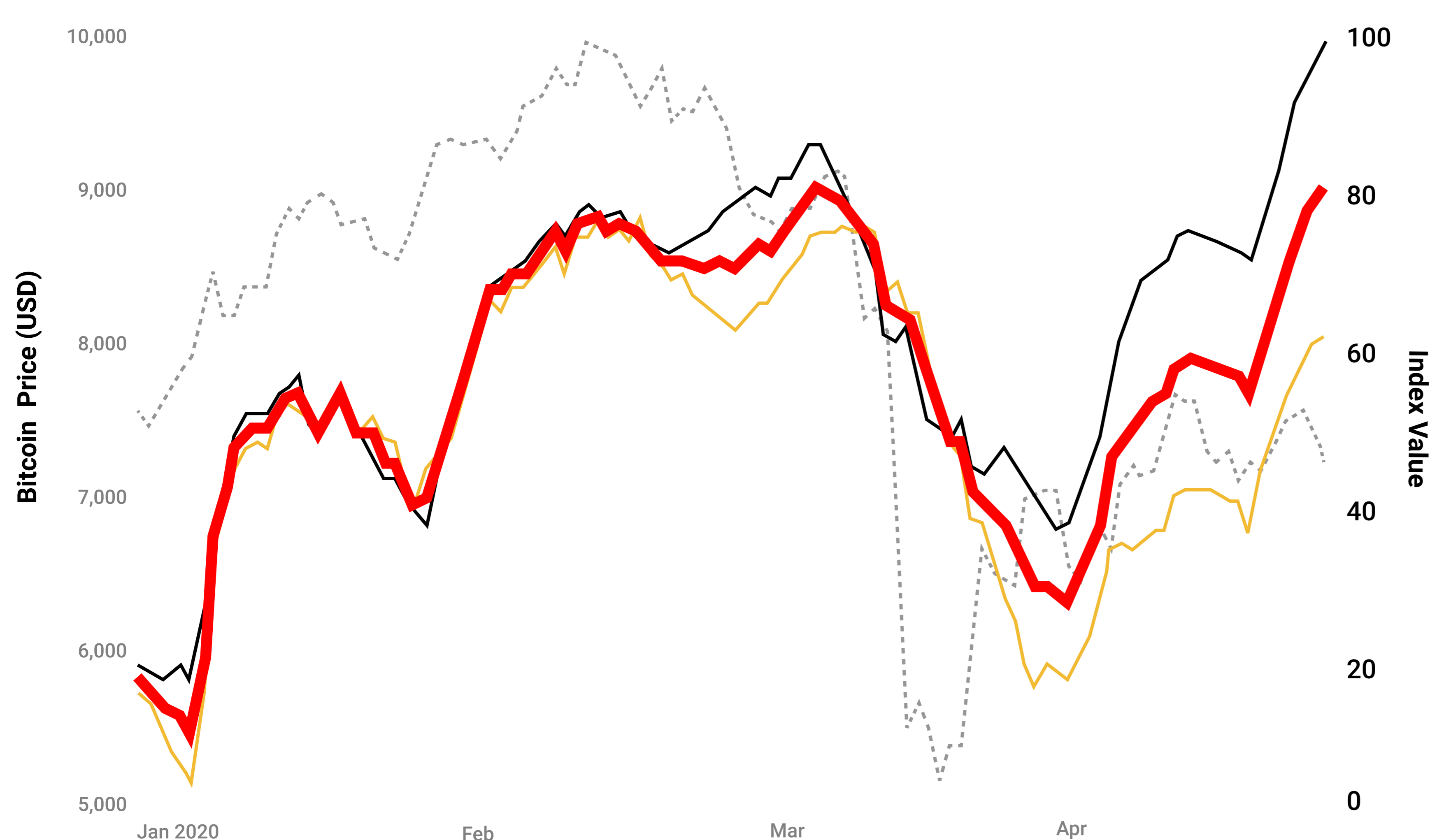
Firstly, The Month in Numbers summarises all relevant information about *GNI* and the *GN Compass* in one page. Secondly, *GNI Recap* assesses the aggregate state of the Bitcoin ecosystem by analysing *GNI*'s development and that of its subcomponents during April. Finally, information about Bitcoin fundamentals and price trends are combined in the *GN Compass* to identify the current regime, its development over time and its stability.

Section 1: The Month in Numbers

Section 2: *GNI* Recap

Section 3: *GN Compass*

Network Health & Major Sub-Components



PART 2: SUBINDEX DEEPDIVE

To get a better understanding of how *GNI* operates and what subtleties it can pick up on, *GNI Deep Dive* is delving into its constituent sub-indices to see what they can reveal about the foundation of the Bitcoin ecosystem, always with the global view in mind. Each section analyses one sub-index and their respective components and extracts what their developments during April tells us about the direction Bitcoin is going.

Section 1: Network Health

Section 2: Sentiment

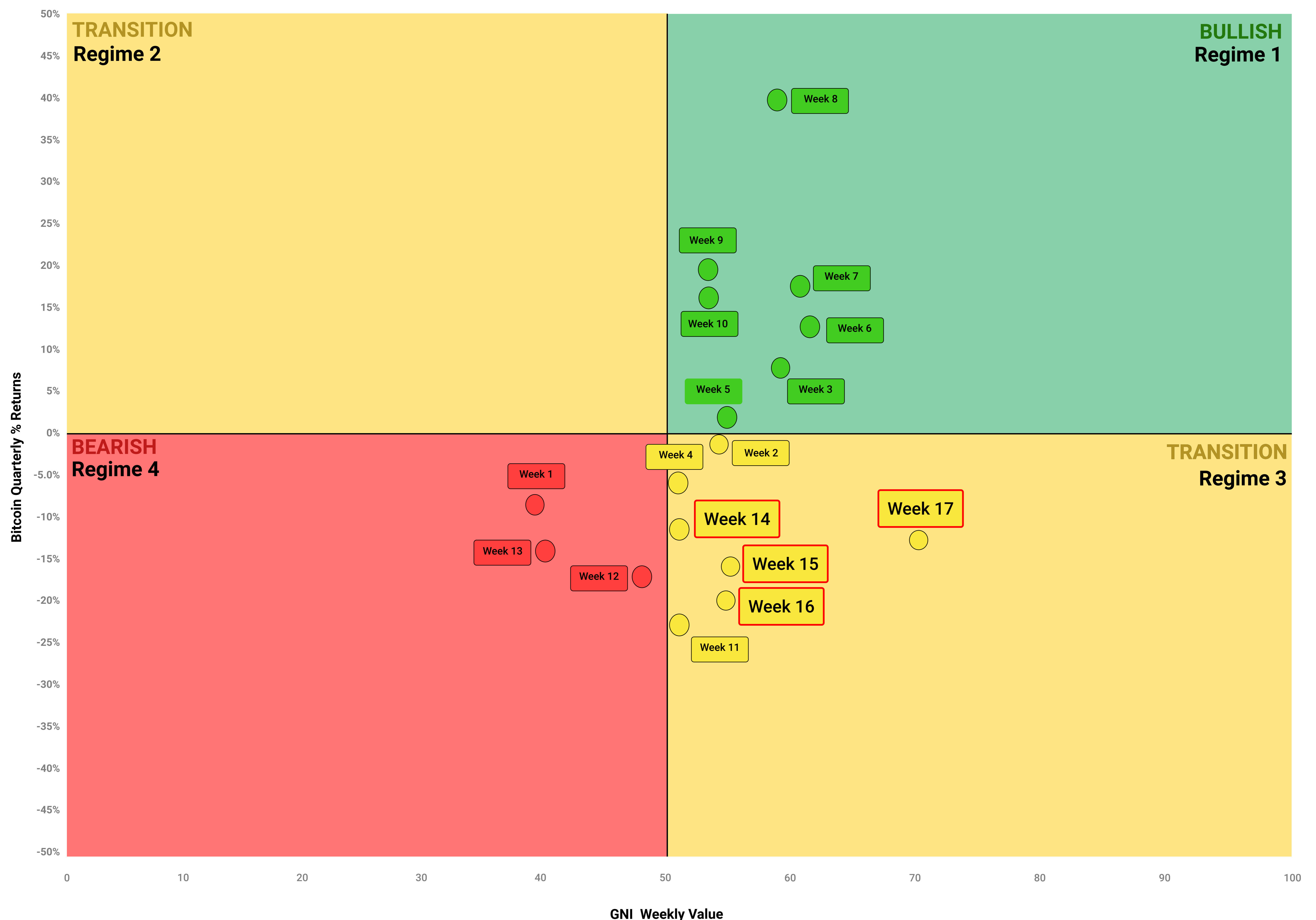
Section 3: Liquidity

PART 1: THE MONTH IN NUMBERS

GNI Region Breakdown

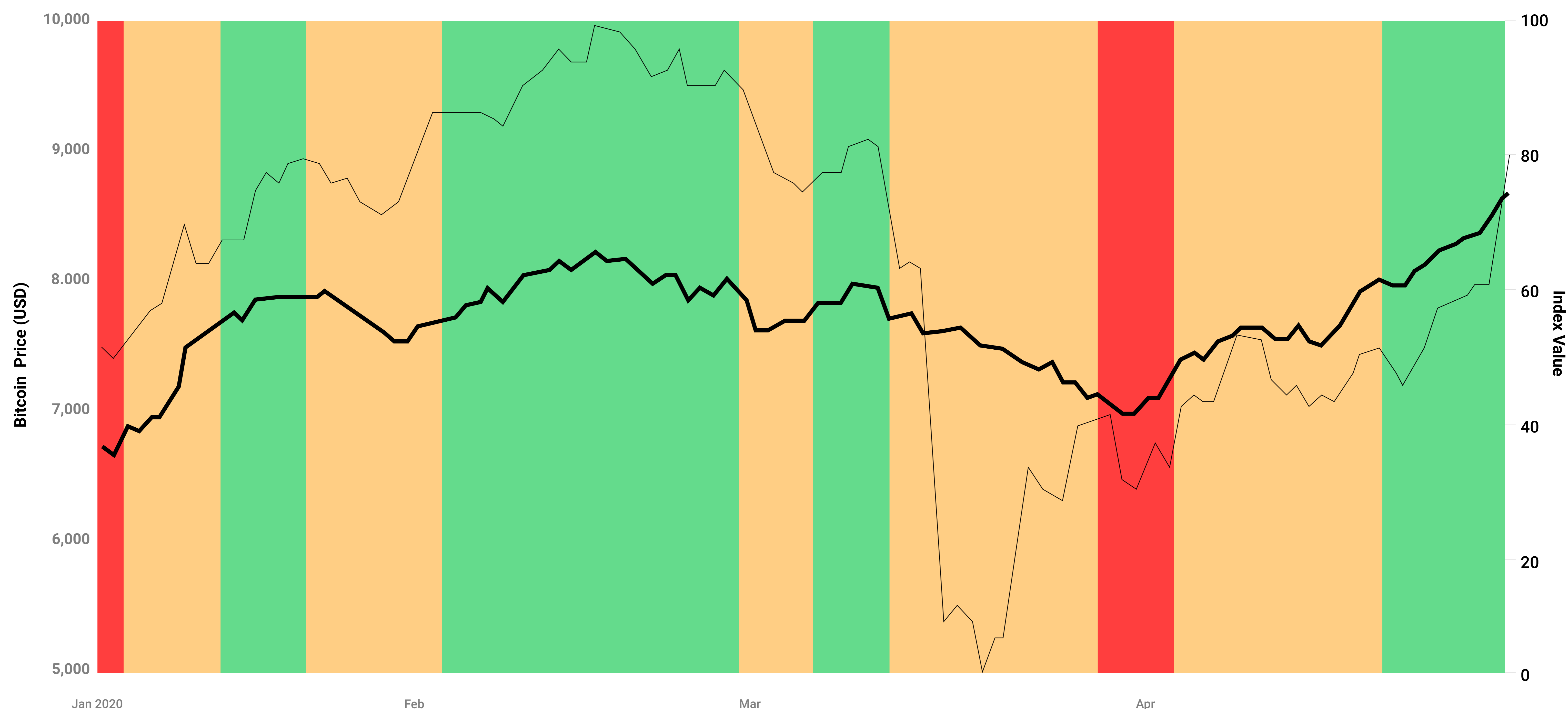
	Last Day April	First Day April	Avg April	Avg March	Year to Date	April Region
GNI Index	74	45	57	51	35	Strong
			14.0%	62.86%	62.86%	
Network Health	81	42	58	53	25	Strong
			38.0%	176.00%	176.00%	
Network Growth	91	47	67	57	26	Strong
			39.6%	184.61%	184.61%	
Network Activity	73	36	49	48	24	Neutral
			33.3%	166.67%	166.67%	
Liquidity	58	52	53	60	40	Neutral
			-6.5%	42.24%	42.24%	
Trading	68	80	72	73	45	Strong
			20.7%	33.34%	33.34%	
Transactions	55	43	47	56	38	Neutral
			0%	47.37%	47.37%	
Sentiment	90	37	64	27	48	Strong
			19.7%	-35.42%	-35.42%	
Investor Sentiment	93	31	57	22	36	Strong
			72.7%	5.56%	5.56%	
Saving Behavior	74	61	90	43	100	Strong
			-79.0%	-91.00%	-91.00%	

The GN Compass



GNI MONTHLY OVERVIEW

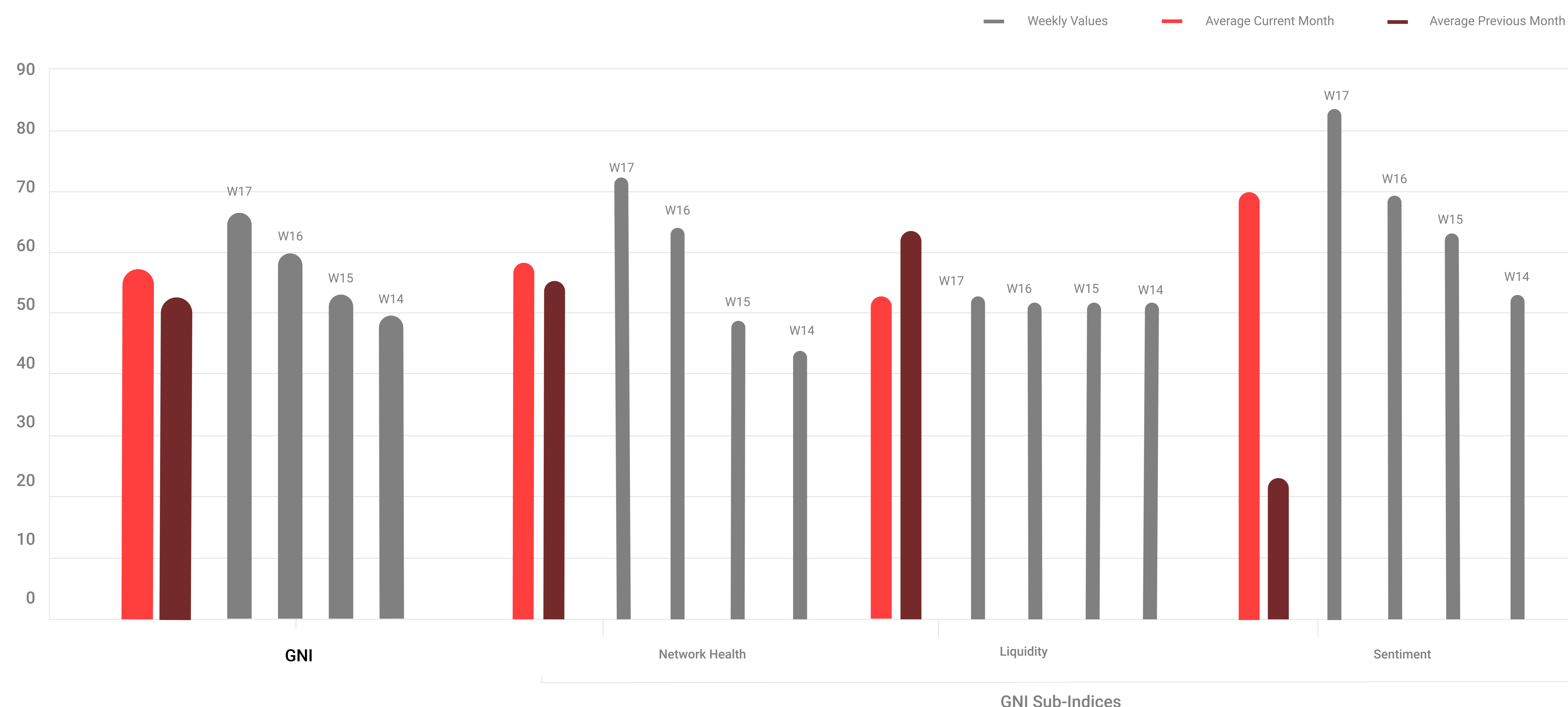
GNI Change Year to Date



While there is no end in sight to the coronavirus crisis, April exhibited pronounced signs of recovery in both Bitcoin price and on-chain fundamentals. After the price drop in March, Bitcoin rebounded strongly in April, rallying by nearly 80% and touching 9,000 USD near the end of April. For the year, per April 30, Bitcoin is up +23%, outperforming all major asset classes other than US Treasuries. *GNI* started April off near the 40 pt mark, solidly in the weak region. As prices rallied, however, so did on-chain fundamentals. *GNI* confidently crossed neutral territory during early/mid April and subsequently registered annual highs on a daily basis.

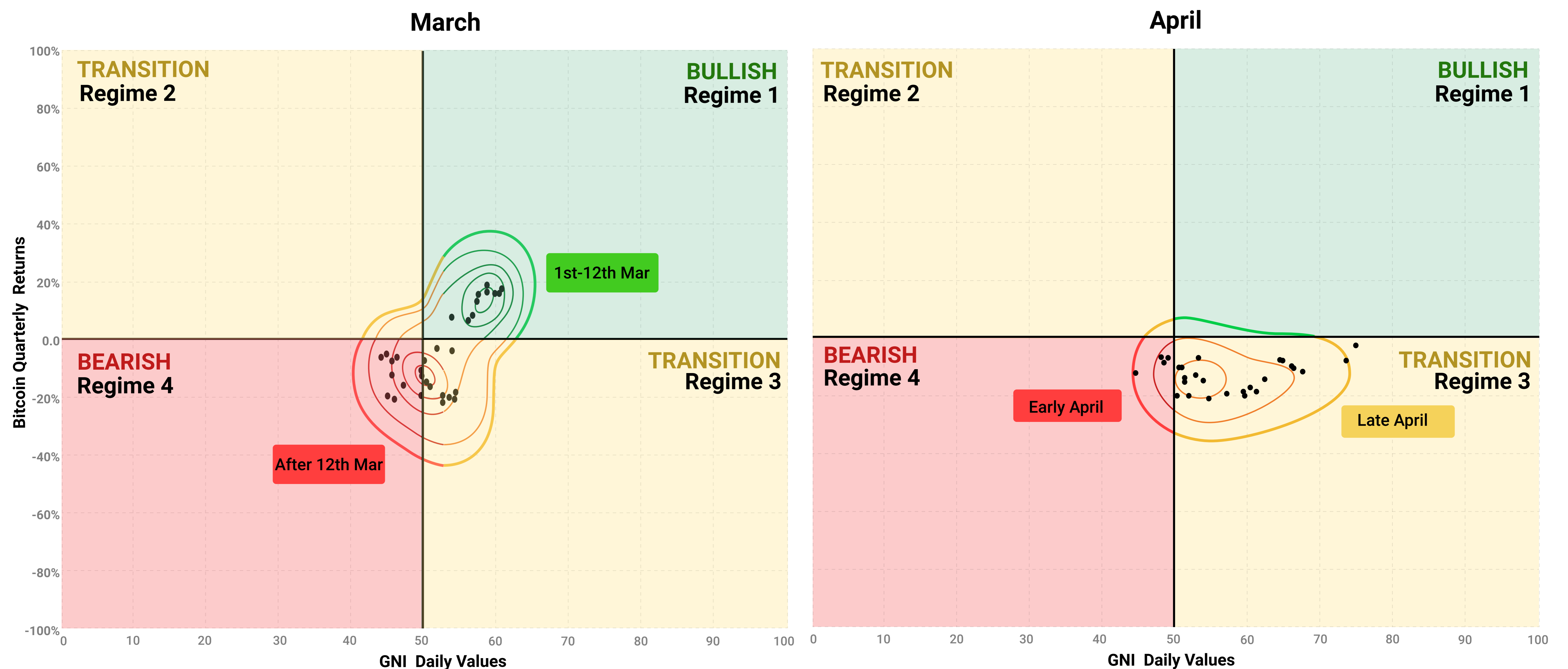
GNI's subindices reacted differently to the aftermath of the March price crash. *Network Health* and *Sentiment* followed a similar trajectory, bottoming out simultaneously in late March, before rising again, consequently driving *GNI* upwards again. *Liquidity*, on the other hand, spiked during the crash, before returning to a baseline level around 50 pts once the markets calmed down. We will further explore this divergence and possible interpretations below.

GNI & Subindex Values



GN COMPASS

GN Compass Contour Plots



This chart depicts each day of the month as a dot on the GN Compass and adds a contour plot indicating the estimated density of these dots. The smaller the area, the lower the deviation within the month and vice versa. A stable regime, thus, results in a focused plot, while a volatile month with significant changes in GNI and/or BTC price yields a wider area.

The GN Compass (GNC) closed out the month of March in regime 4, characterised by weak on-chain fundamentals and negative price trends. Rallying on-chain fundamentals during April suggest a natural recovery process for Bitcoin, pushing the GN Compass out of regime 4 into a transition period, where price trends and fundamentals have not yet aligned. While the sell off in mid March was severe enough to still cause negative quarterly price trends, high GNI now lays the ground for a possible transition into another phase of bullish price behaviour, bolstering Bitcoin going forward.

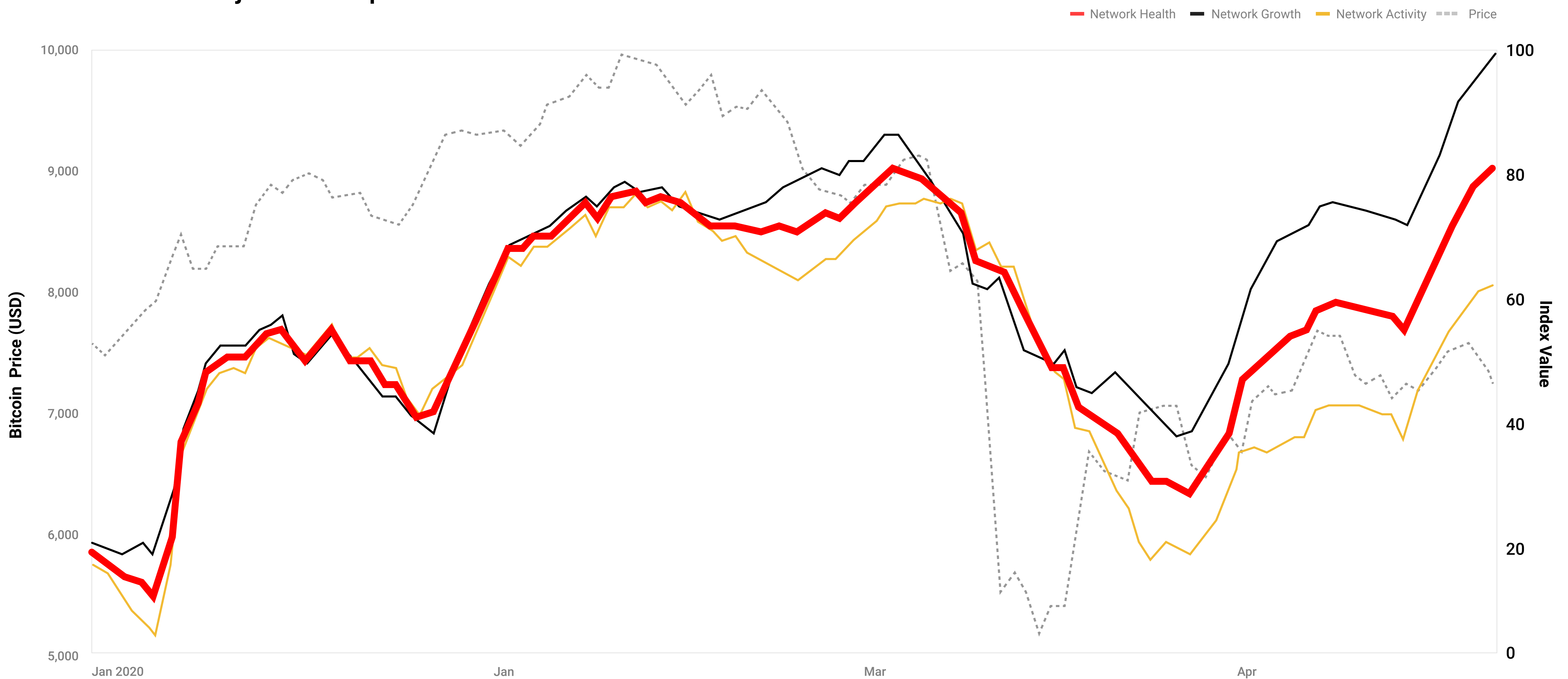
On a side-note, the GN Compass highlights the price drop in mid March as an external event caused by the coronavirus crisis and crashing financial markets, and not by a slow deterioration of Bitcoin fundamentals. Regime 1 and 4 are characterised by matching signals coming from on-chain fundamentals and price trends, respectively bullish and bearish. The GN Compass thus predicts these regions to vary less over time and to exhibit a certain degree of stability, in contrast to the unstable transition regimes 2 and 3, characterised by divergence between price trends and on-chain fundamentals.

The market crash in mid March threw Bitcoin out of a prolonged stay in the bullish regime 1 into the supposedly stable, bearish regime 4. On-chain fundamentals rallied quickly, however, without suffering from a prolonged mutual reinforcement between negative price trends and weak GNI, indicating that the Bitcoin ecosystem accrued no lasting damage by the sell off in mid March.

PART 2: SUBINDEX DEEPDIVE: APRIL REVIEW

NETWORK HEALTH

Network Health & Major Sub-Components



Network Health recovered well from the crash across all subcomponents and is one of the main driving forces in the *GNI*'s recovery. Dropping to below 35 pts at the end of March, *Network Health* came back very strong, increasing to more than double its early April value, surging beyond 80 pts in a single month. This can be attributed in equal parts to *Network Growth* and *Network Activity*, which increased due to new entities coming into the network and a resurgence of investor activity respectively.

The heightened interest in Bitcoin in response to the crashing economy comes to no surprise, given the inflationary pressure central banks all over the world exert on the financial system in an attempt of damage mitigation. Bitcoin by construction exhibits a low rate of inflation, which becomes even more pronounced with the upcoming halvening. It can thus act similar to gold as a hedge against inflationary effects. While Bitcoin historically provides less stability than gold, its potential for future growth can provide more attractive upsides for many investors. See *The Market Compass - Special Edition: Introducing GNI* for a more detailed analysis.

A glance at *Transaction Rate* reveals that overall on-chain activity is steadily picking up again, indicating a successive decrease of caution or even fear in investors and a return to normality. This recovery narrative becomes even more positive, once we look at *Network Growth*. Last month's developments already indicated a substantial influx of new users entering the network, a trend that continued throughout April. *Entities Net Growth* kept increasing from the lows during the market crash in March, doubling the value it had at the beginning of the year, indicating a prolonged heightened interest in Bitcoin. This number is all the more significant, since we are talking about increasing growth rates here!

Bitcoin: Transaction Rate (7d Moving Average)

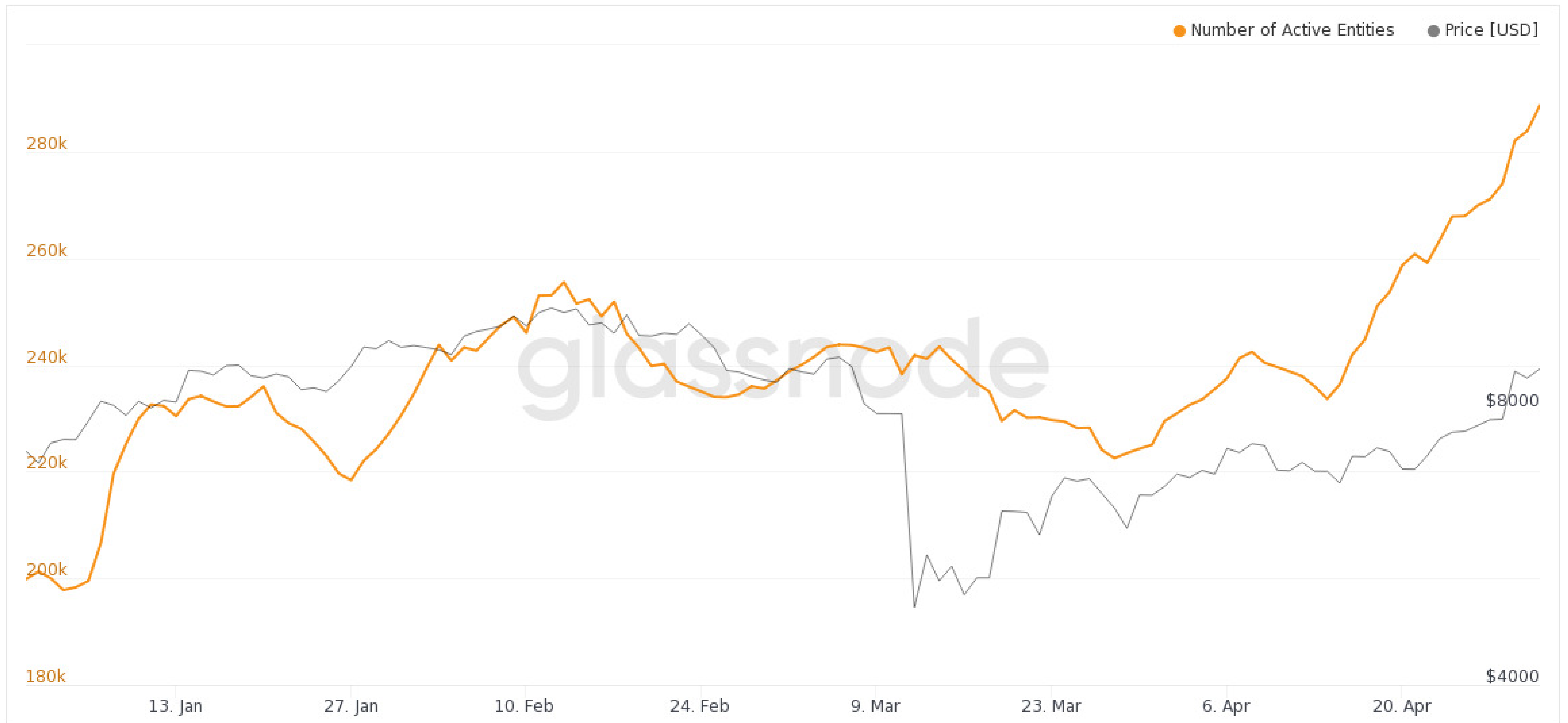


Bitcoin: Entities Net Growth (7d Moving Average)



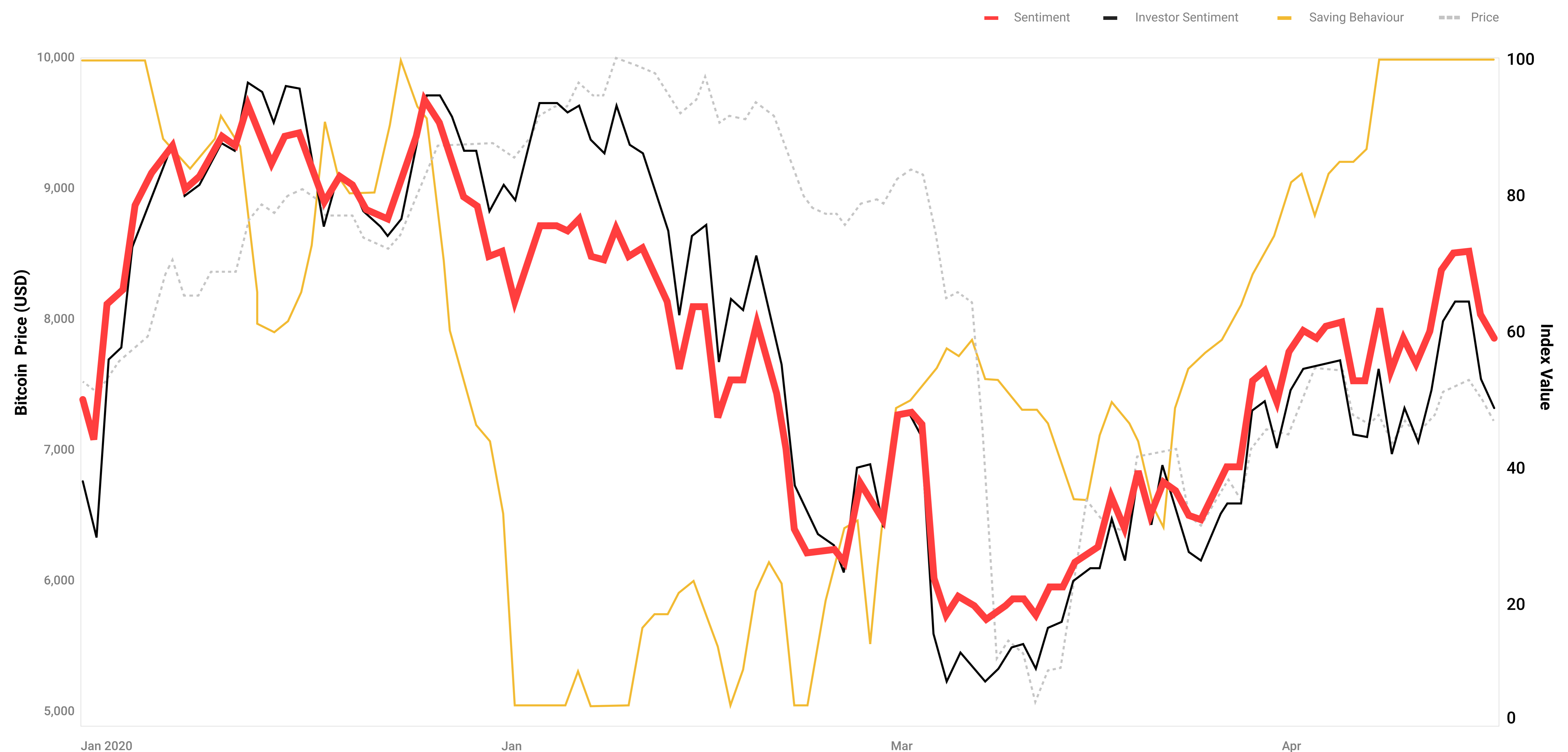
The relevance of this recent development becomes clearer when looking at the level of *Active Entities* over the past 3 years. With an increase of 60,000 (7d MA) within a single month, Active Entities equals its second highest value together with June '19 and is only surpassed by the bull-run days of 2017. Keep in mind, that this upwards trend is still ongoing!

Bitcoin: Active Entities (7d Moving Average)



SENTIMENT

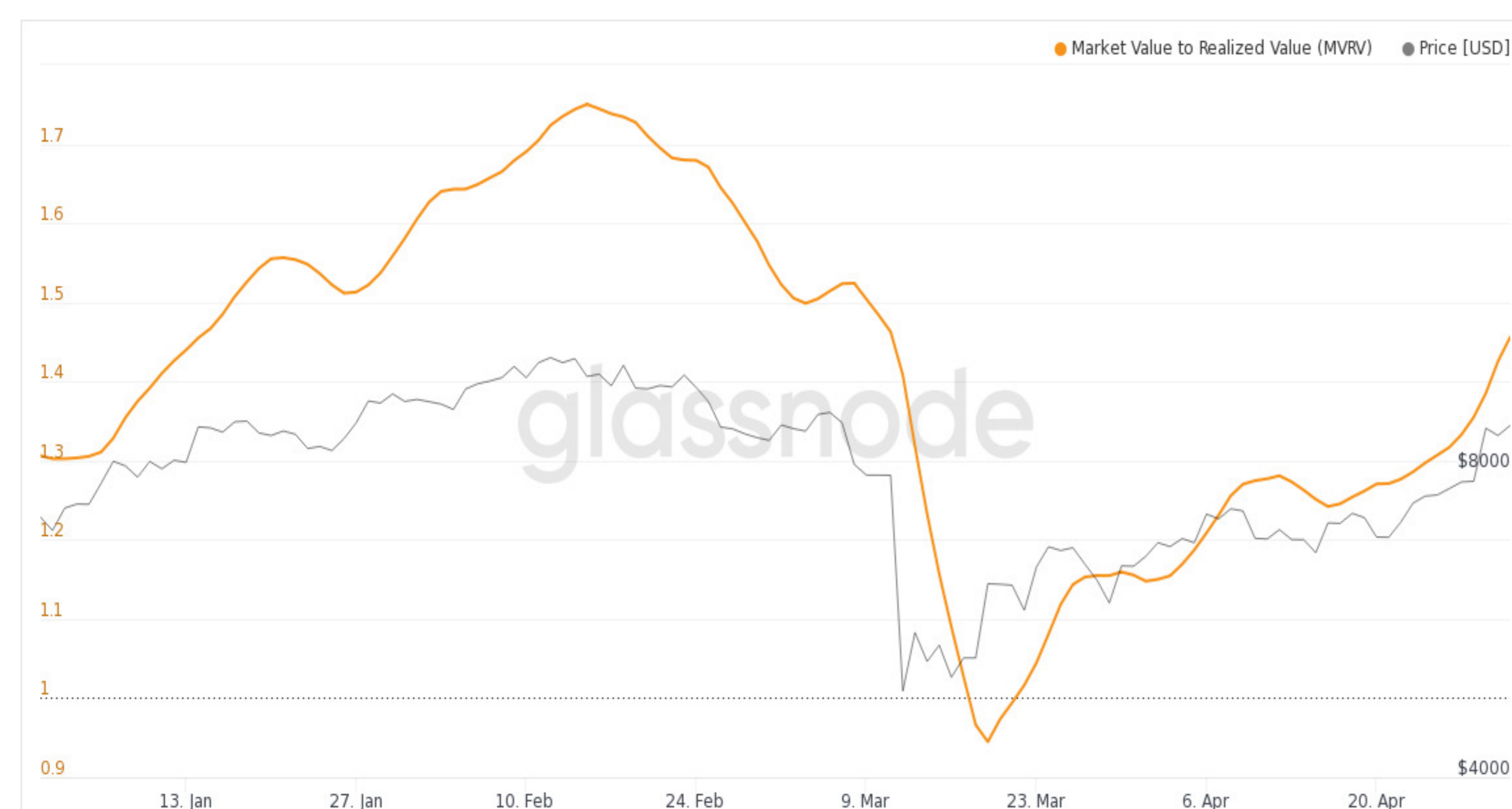
Sentiment & Major Sub-Components



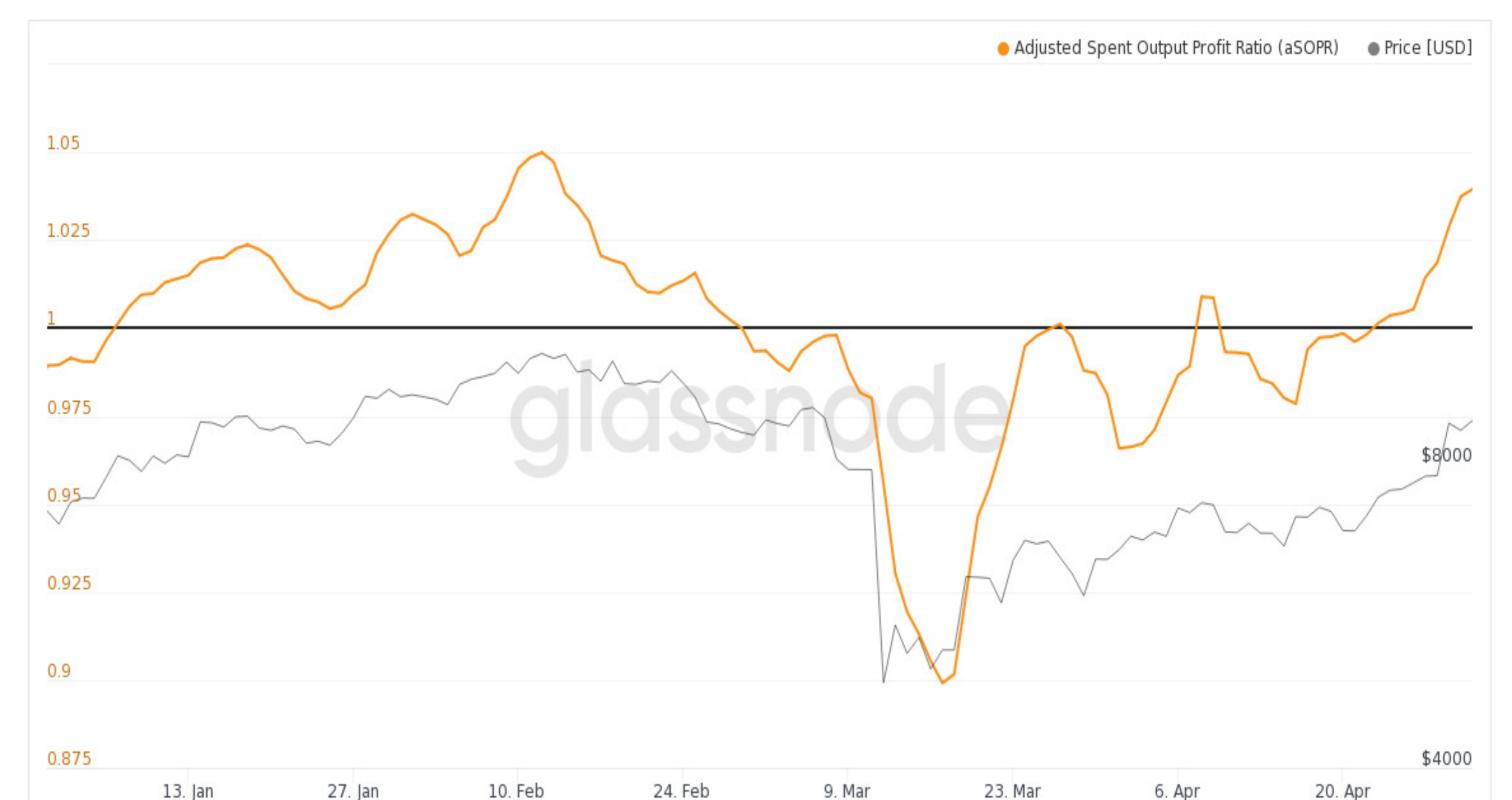
Reverting price trends tend to be accompanied by changes to *Investor Sentiment* by definition. This held in April too: *Sentiment* increased steadily throughout the month, further amplifying the uptrend in *GNI* set in motion by *Network Health*. Overall, we can detect a return back to normality, with *Sentiment* reaching levels similar to those last experienced in late January. The recovery to previously intra-year highs is in itself a strong sign that March is now firmly in the rear-view mirror.

Measures for unrealised profits are all increasing steadily, suggesting a partial shift in investor mindset. After MVRV's short dip below parity at the end of March, increasing Bitcoin prices have driven it near the 1.5 mark again, meaning that a significant amount of profits are yet to be realised. Actual on-chain transaction behaviour showed a less clear pattern in April. The *Account Based SOPR* shows that, on average, Bitcoin investors were trading at a loss during most of April, before finally breaking into profits again on April 24th. This provides increasing evidence that investor sentiment is not predominantly driven by loss mitigation anymore and that we are slowly returning to a more bullish outlook on the market as a whole.

Bitcoin: MVRV Ratio (7d Moving Average)



Bitcoin: aSOPR (7d Moving Average)



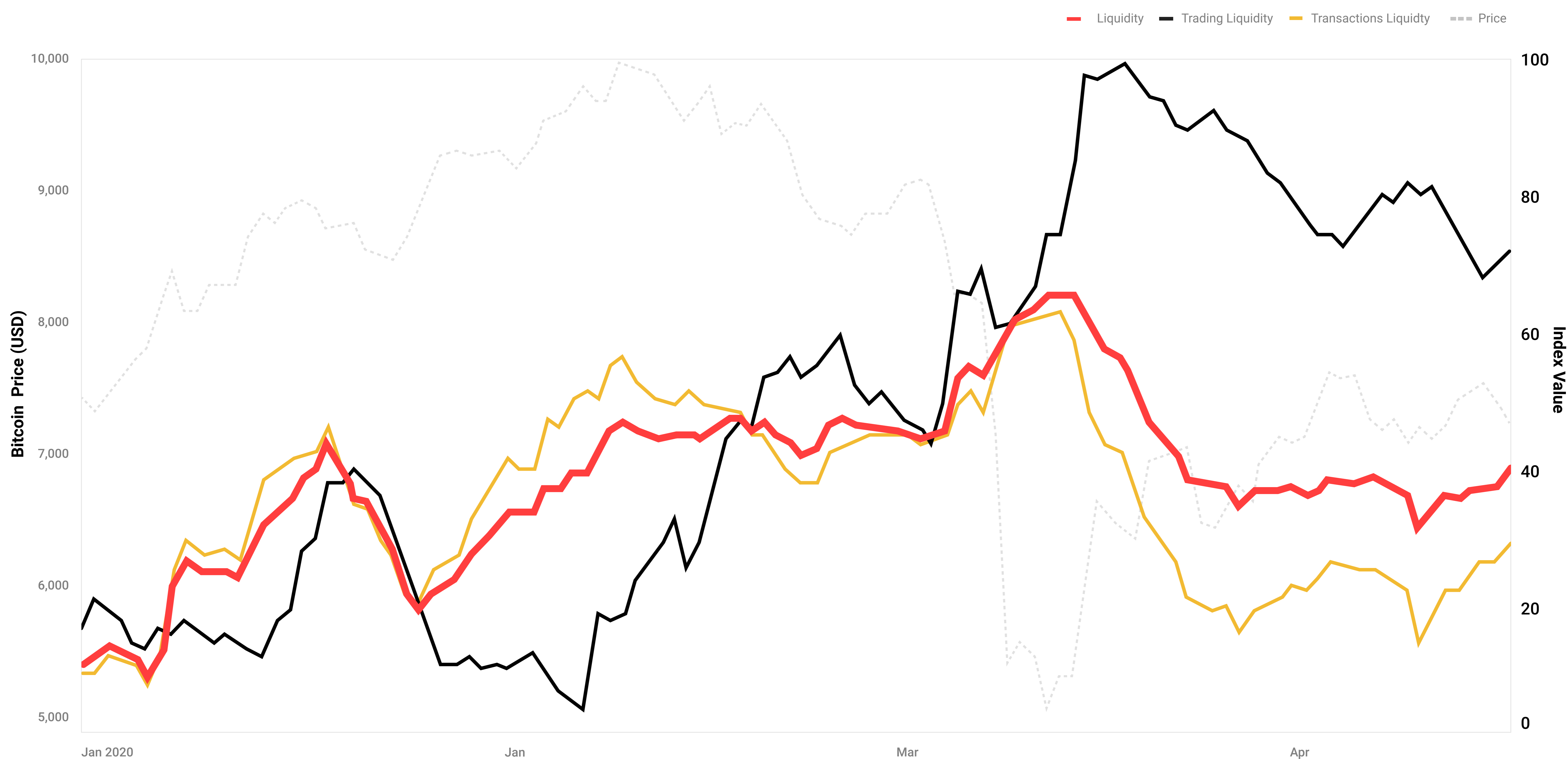
Miners also seem to have recovered, seeing hashrate numbers come back to values last seen in February, following the significant decrease in hash rates during the month of March. This in turn could be the calm before the storm, once the halving impacts mining rewards on May 11th.

Bitcoin: Hash Rate (7d Moving Average)



LIQUIDITY

Liquidity & Major Sub-Components



Liquidity, especially *Trading Liquidity*, was the only real winner of the turmoil experienced in March, and is the only sub-index showing a subsequent decline into April. This in itself is not a bad signal, but has to be analysed in context with the complex relationship liquidity and price developments have in most economic systems.

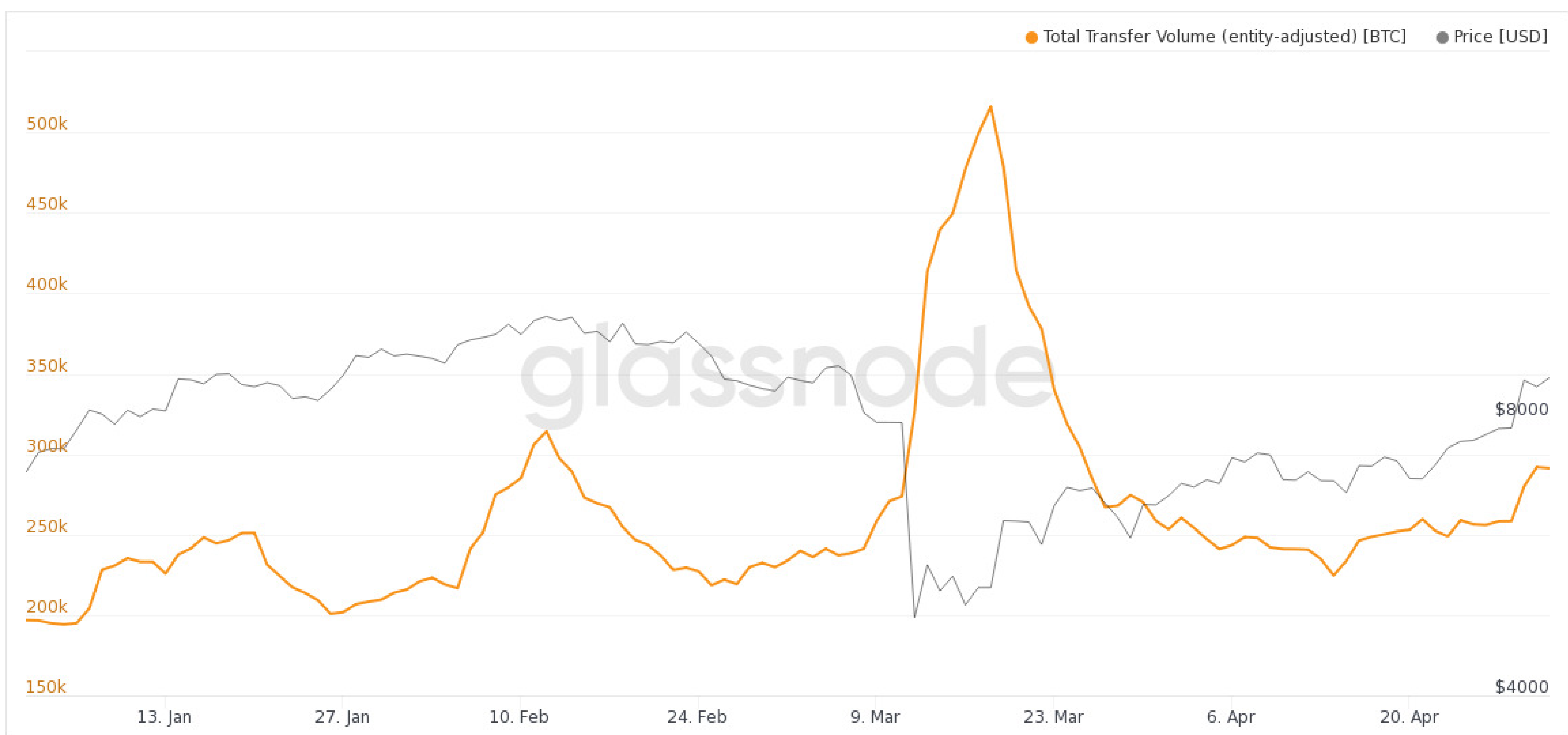
The increase in *Trading Liquidity* during the drop was driven largely by two factors. For one, as annualized Bitcoin volatility touched 200% during the March correction, investors sought to park their assets in less volatile asset classes. Secondly, as asset prices collapsed on financial markets the world over, many investors were faced with margin calls and were subsequently forced to exit their positions. Viewed in this light, the subsequent decrease in *Trading Liquidity* during April can thus be interpreted as a vote of confidence in Bitcoin. The selling pressure has ebbed and this return to normalcy has manifested itself in the strength of Bitcoin.

Bitcoin: Entity-Adjusted Transaction Count (7d Moving Average)



Transaction Liquidity stayed subpar during most of April, but has shown signs of recovery near the end of the month. *Transfer Volume (entity adjusted)*, i.e. the total amount of Bitcoin transferred on-chain between entities, returned to normal after the turmoil in March and stayed constant during most of April but increased towards the end of the month. Year-to-date it now stands 50% higher than at the beginning of the year. *Transaction Count (entity adjusted)* kept increasing uninterrupted all throughout April, which again suggests reduced fear among investors. It reached its pre-crash value at the end of month, showing no signs of slowing down.

Bitcoin: Entity-Adjusted Volume (Total) (7d Moving Average)



Crashing markets in March left investors wondering how the Bitcoin ecosystem would react in the weeks to come. April showed strong signs of recovery in both Bitcoin price and GNI. Most sub metrics regained their losses, indicating that Bitcoin accrued no long-term damage by the sell of in mid March. Some developments even stir up hope that investors might benefit from the crisis, first of all the heightened interest, indicated by the influx of new entities entering the network. In combination with a strong GNI, this augurs well for Bitcoin's prospects over the coming months.

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