

Q4 Market Observations

Q4 Market Activity Snapshot

\$7.6B

2020 Q4 Loan Originations

\$3.8B

Total Active Loans as of Dec 2020

\$8.1B

Q4 Spot Volume Traded

\$4.5B

Q4 Derivatives Volume Traded

2020 Overall Results

\$20.7B

Spot YTD

\$5.9B

Derivatives YTD

\$19B

Loan Originations YTD

Introduction

This report highlights key trends Genesis observed across the digital asset market in Q4 2020. It is written from the vantage point of our core businesses, which include spot trading, derivatives trading, and lending.

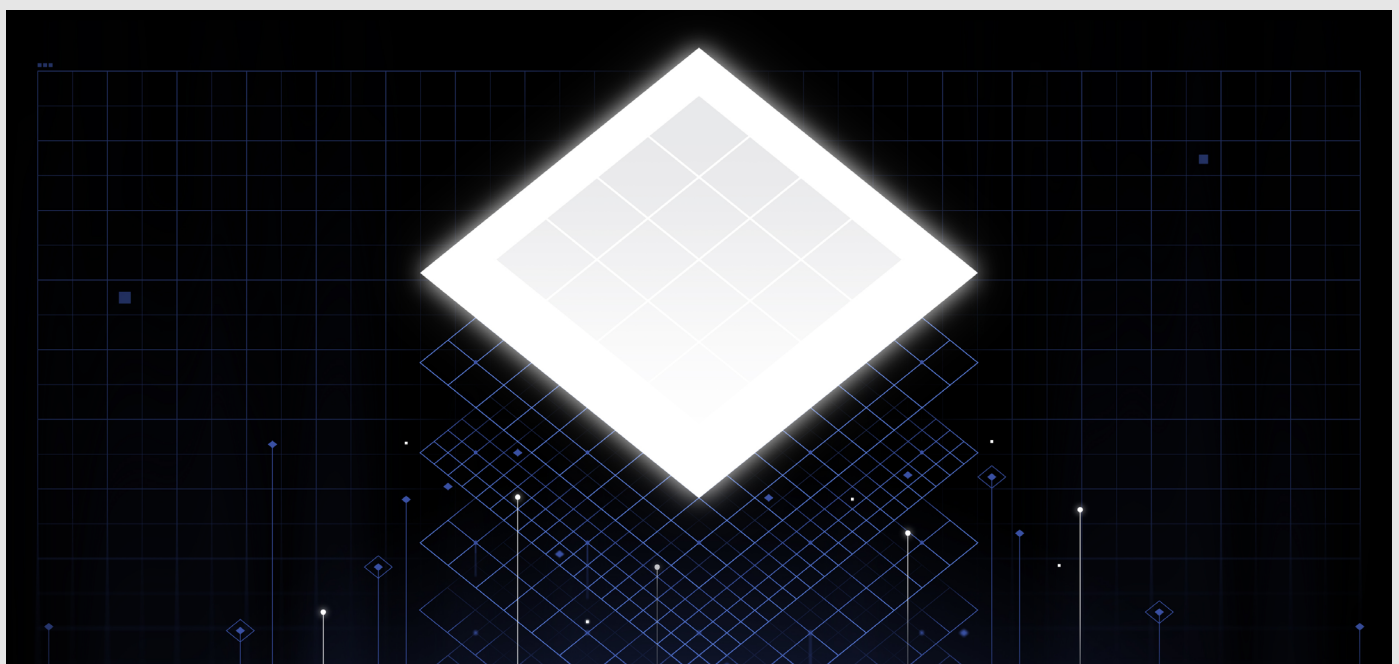
Q4 was an incredible finish to a year that was already notable for significant growth at Genesis and the market at large. Genesis set both quarterly and yearly records for spot and derivatives trading volume, and loan originations hit new highs driven by the pickup in market activity, the tremendous growth in institutional buying, and an influx of new investments into Grayscale products. Genesis has grown alongside the increased volume flowing across our desk - expanding our reach globally, improving our technological capabilities, adding support to trade new assets, and doubling our team in headcount.

We believe this market's momentum will continue to accelerate as we head into 2021, and we are continuing to evolve our digital asset prime brokerage offering with the following principles in mind:

More Information

To learn more about Genesis, or to work together with the Genesis team, contact us at:

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www.genesistrading.com



Introduction - Principles

1. **Access to capital** and a sizable **balance sheet** are key differentiators.

- It has become more important than ever for us to have adequate working capital across coin and cash as the size of our clients and the scale of their activities with us have grown. We have seen substantial benefits from our ability to provide immediate liquidity and financing to our institutional trading counterparts.
- We will continue working to provide the most robust access globally to BTC, USD (stable), and other digital assets. We surpassed \$5B in assets at the end of 2020.

2. **Great client-service and customer partnerships** will remain core to our business.

- We will always view finding the most creative and effective ways to help our clients execute on their vision as our first priority.
- We are extremely focused on staying nimble and flexible as we scale our execution platform.

3. A **comprehensive platform** and service offering will help our clients achieve **greater capital efficiency**.

- We continue to expand Genesis Prime, reducing friction and cost of capital for our clients while developing new ways to trade, lend, custody and receive financing against assets on the platform.

As we move into 2021, we've done a deep dive on key trends from 2020 to better understand the market's evolution and anticipate our clients' needs.

Q4 Report

Table of Contents

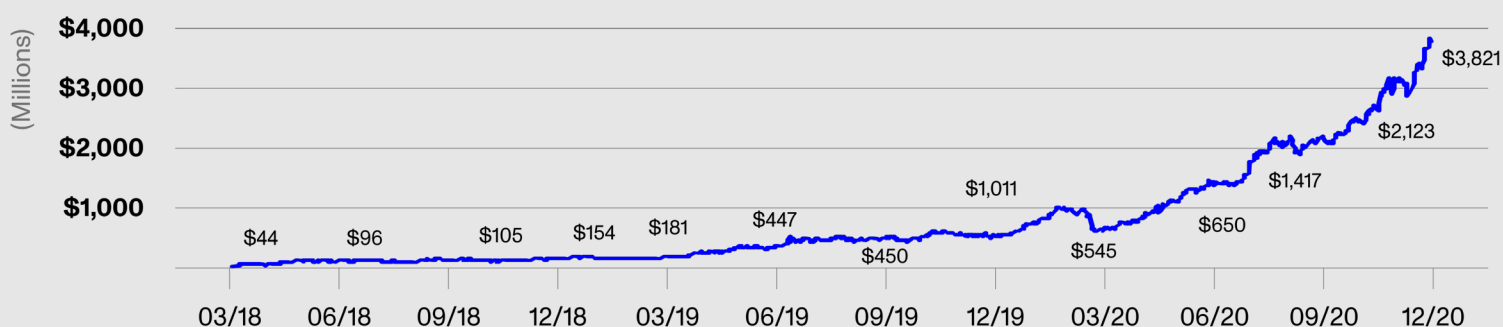
- Lending
- Trading
- Derivatives
- Macro Environment: Stablecoins

1

Digital Asset Lending

Genesis continued to see tremendous growth in our lending business across Q4. In total, we **added over \$7.6B in new originations**. This marked our largest quarter to date, up from \$5.2B of new originations in Q3, which had been our largest quarter at that time. Active Loans Outstanding surged to \$3.8B at the end of Q4, up from \$2.1B last quarter, representing a roughly 80% increase.

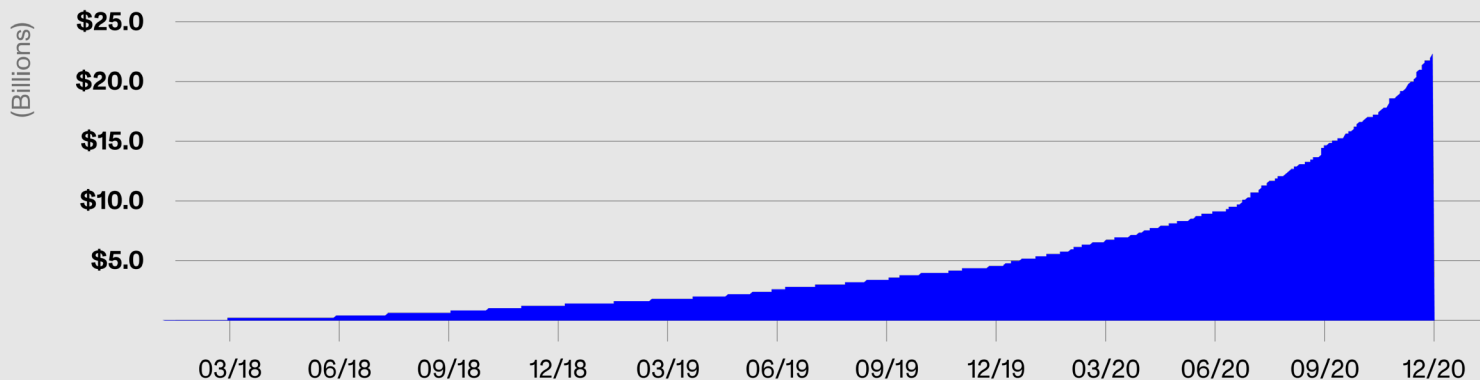
Active Loans Outstanding



Cumulative originations increased 55.6% from Q3, marking an eleventh consecutive quarter of strong growth and **bringing our total originations to \$21.2B since we launched the lending business in March 2018**. Our loan portfolio substantially increased in value through a combination of new issuances across cash and coin, along with a significant rise in asset prices on existing bitcoin loans.

(\$ in mm, except BTC Price)	09/30/20	12/31/20	QoQ Growth
Originations Since Inception	\$13,614	\$21,186	55%
Active Loans	\$2,121	\$3,821	80%
BTC Price	\$10,784	\$29,374	172%

Cumulative Originations



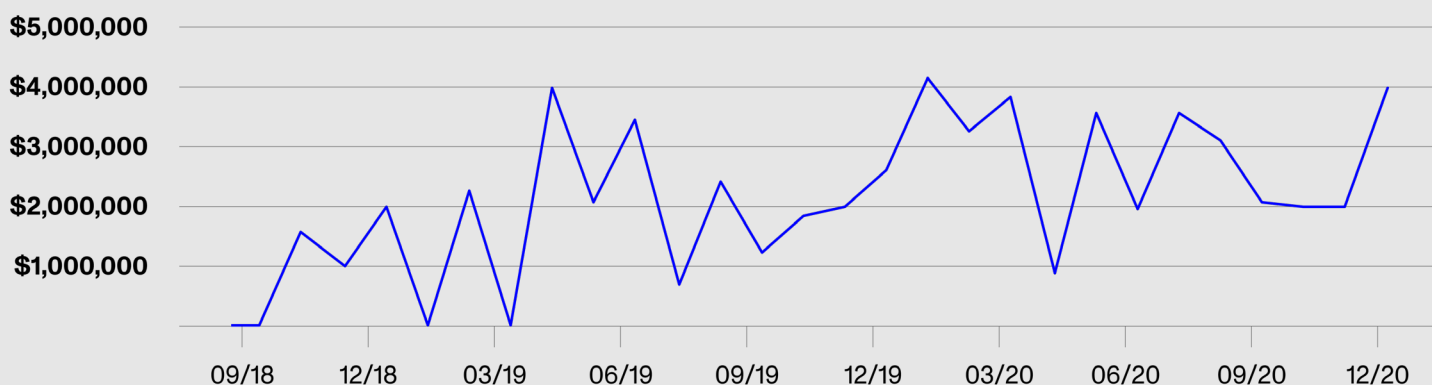
Institutional Lenders Enter the Market in Q4, But the Demand for Cash is Relentless

In Q4, Genesis saw a wave of new institutional USD and stablecoin lenders enter the market. In addition to structuring a new facility with one of our banking partners, we saw a significant uptick in lending volumes with ultra-high-net-worth individuals, corporations, traditional hedge funds, and family offices who wanted to enter the market for the first time. These counterparties saw the potential to generate excess yield on idle cash until the time was right to deploy that cash towards long positions in BTC. Our loan origination data supports this qualitative assessment through a few different lenses.

First, we noticed an increase in the average origination size of USD and stablecoin loans to Genesis. At the end of Q3, the average ticket was about \$2.0mm, which has now increased to \$4.0mm, representing a 100% increase QoQ.

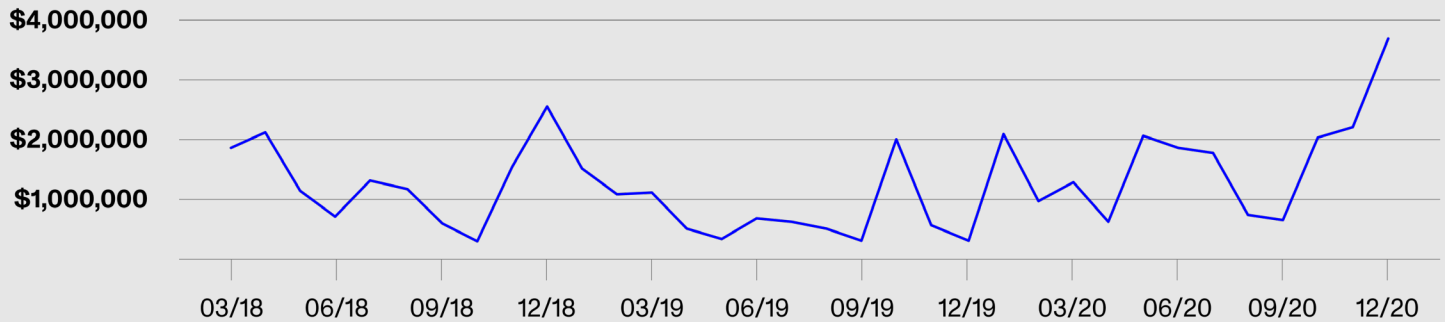
Second, we also saw the average loan size from first-time lenders

Average USD Origination Size



increasing from \$590k to \$3.2mm in the past quarter, representing a 538% quarterly increase.

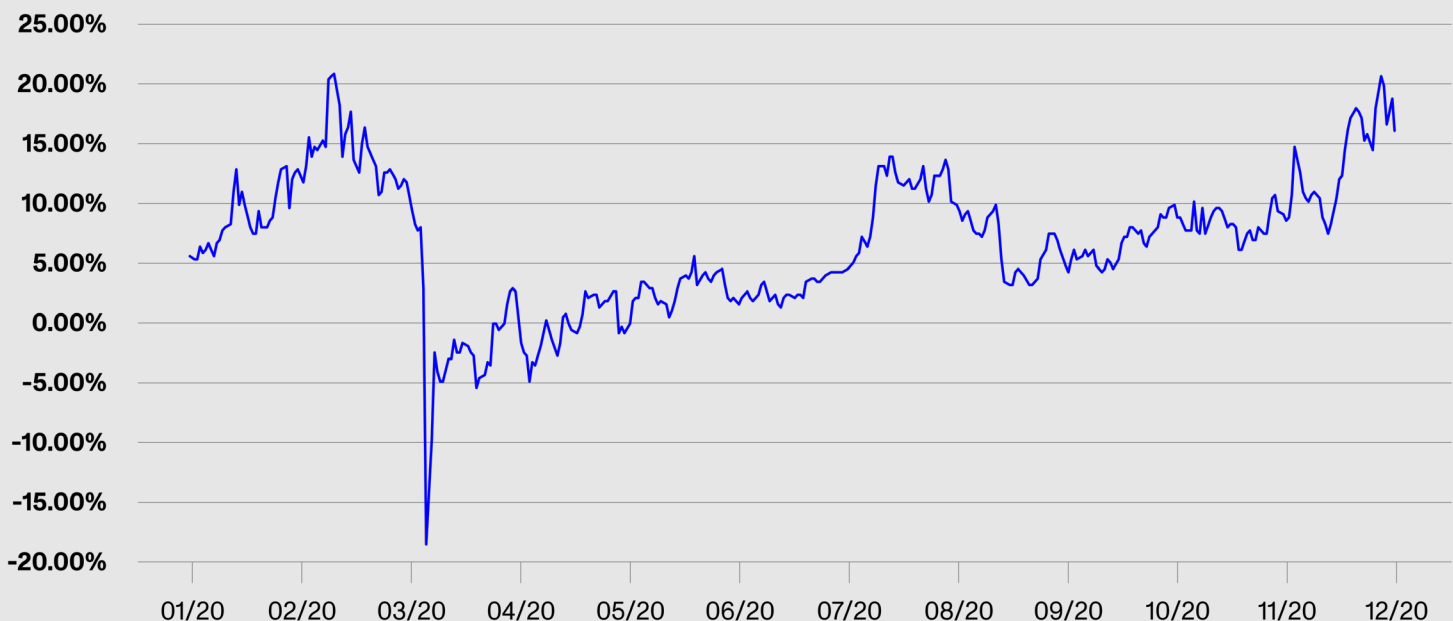
Average Origination Size via First-Time Lenders



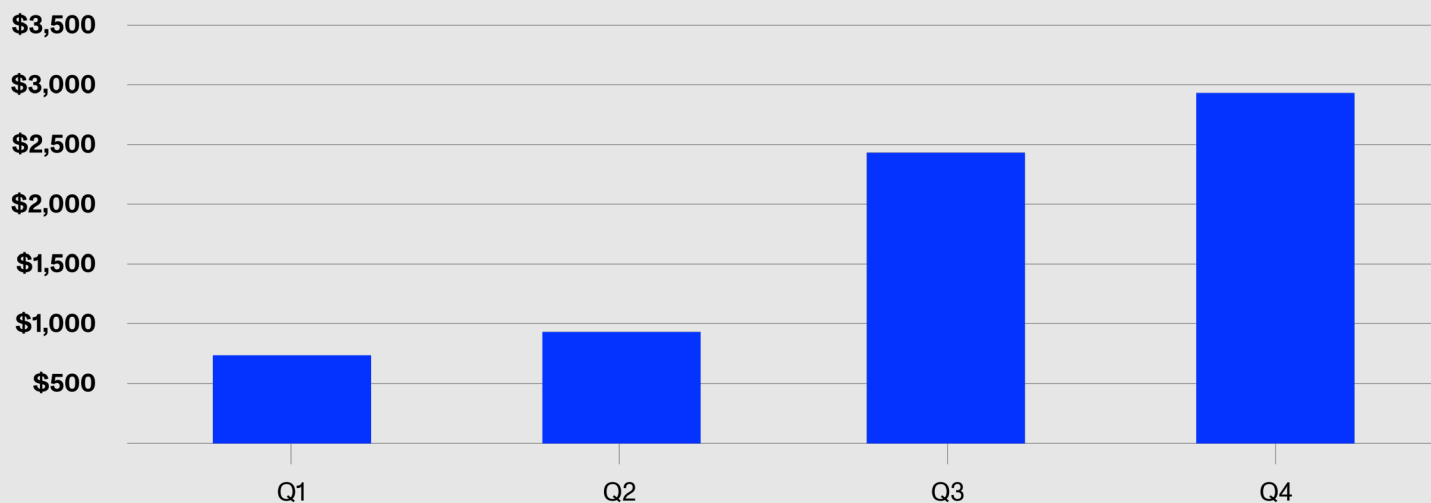
We believe these trends point towards a shift in the demographics of USD lenders in crypto markets. In previous reports, we noted a structural gap between the reliance on levered products such as futures or perpetual swaps vs. the amount of cash that is being deployed to arb those products vs. spot markets. We believe we may be in the early stages of seeing more of that institutional cash flow into the digital asset space in various ways. That said, taking a closer look at the spread/basis between futures and spot markets, we will still need to see a lot more cash inflows before spreads normalize.

Even with significant new cash originations generated over the last

Basis (% ann) to near future



USD Originations



two quarters, funding curves in the most recent bull-run continue to widen out given how much long exposure is being taken via levered products relative to fully-funded spot buying. We believe this is due to the lack of cash available to sophisticated trading firms to fully collapse the structural basis that continues to persist, despite the ability to capture double-digit yields fully secured in BTC. As Genesis continues to expand access to capital, we are encouraged that more traditional lending institutions are continuing to take advantage of yield opportunities in the market.

Q4 2020 Loan Portfolio Composition

In the fourth quarter, our BTC as a percentage of loans outstanding increased significantly from 40.8% to 53.9% as of December 31, 2020. We believe this was due to the price appreciation of BTC and its inflation impact on loans outstanding. ETH loans outstanding as a % of our portfolio also continued to increase QoQ, currently representing 15.5% of our book. Significant new ETH loan issuance was tied to in-kind borrow/trust creates for Grayscale products and to other new ETH-trusts on the market where the public shares tend to trade higher than the NAV/underlying. Cash and Equivalents, along with other non-major cryptos, fell as a % of our portfolio primarily attributable to BTC's and ETH's price inflation.

BTC as a Percentage of
Loans Outstanding:

53.9%

Unlike XRP, other smaller cap assets had minimal changes QoQ. XRP has shrunk to 0.4% of the loan portfolio, given our decision to actively wind down XRP lending and borrowing altogether following the

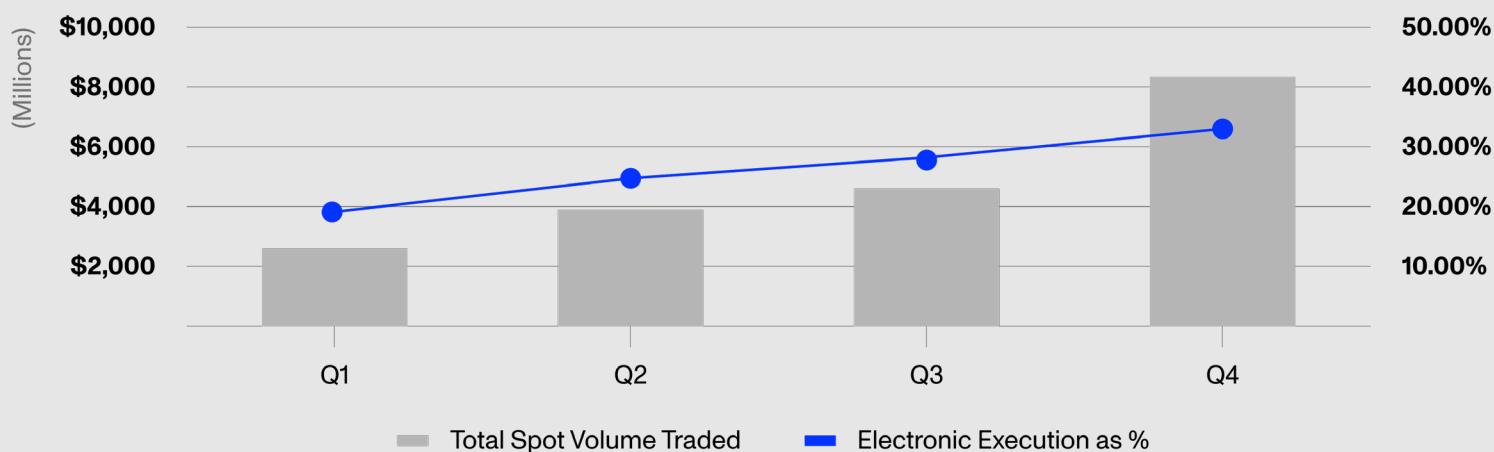
SEC lawsuit and enforcement action. In addition to ceasing lending and borrowing activity, we have stopped making markets in XRP on the spot OTC and derivatives trading side of our business. We have bundled all small coin percentages in the table below in the “others” category.

Asset	03/31/20	06/30/20	09/30/20	12/31/20
BTC	44.8%	51.2%	40.8%	53.9%
BCH	5.8%	4.5%	4.3%	2.9%
ETH	5.6%	7.4%	12.4%	15.5%
ETC	2.1%	1.7%	1.0%	0.2%
XRP	2.3%	1.9%	1.4%	0.4%
LTC	0.7%	0.3%	0.6%	1.0%
USD & Equivalents	36.6%	32.0%	34.5%	23.2%
Other	2.1%	1.0%	4.9%	2.8%

2 Digital Asset Trading

Genesis traded \$8.1B in Q4 spot volume, up 80% from Q3. While the majority of transactions are still traded on an OTC basis with major institutional counterparties, we have seen a consistent upward trend in electronic execution as a percentage of the overall trading composition. In Q4, Genesis executed almost 32.3% of all spot trading volume through our new Prime smart-order routing engine, increasing 27.8% from Q3. We expect this trend to continue as we introduce new algorithmic strategies 1) that we can allow our clients to access directly via our upcoming agency trading launch; and 2) that we can use internally to hedge our principal trading flow, providing the ability to make tighter markets for our clients on larger OTC trades.

Genesis Spot Trading Volumes



In addition to expanding our electronic capabilities, we have also broadened our suite of supported crypto assets. This has been important in the growth of Genesis trading volumes. The biggest driver of growth here has been that our counterparties generally want to do all of their trading with one counterparty. (For example, if a fund wants to sell BTC for an altcoin, they do not want to make one trade

with Genesis and another with a different dealer, as the operational burden would be too cumbersome.) The assets we choose to support are determined through multiple lenses, depending on the Genesis entity involved - 1) permissible assets based on the regulatory framework; 2) client demand (newly added assets we began dealing with in at least one of our entities in Q4 include AAVE, ADA, ALGO, ATOM, COMP, DOT, FIL, KSM, LINK, RUNE, SNX, SOL, SUSHI, THETA, UNI, and YFI) and 3) always acting in the best interests of our clients and the general public.

3

Digital Asset Derivatives

Crypto Options Reach Institutional Scale in Q4 2020

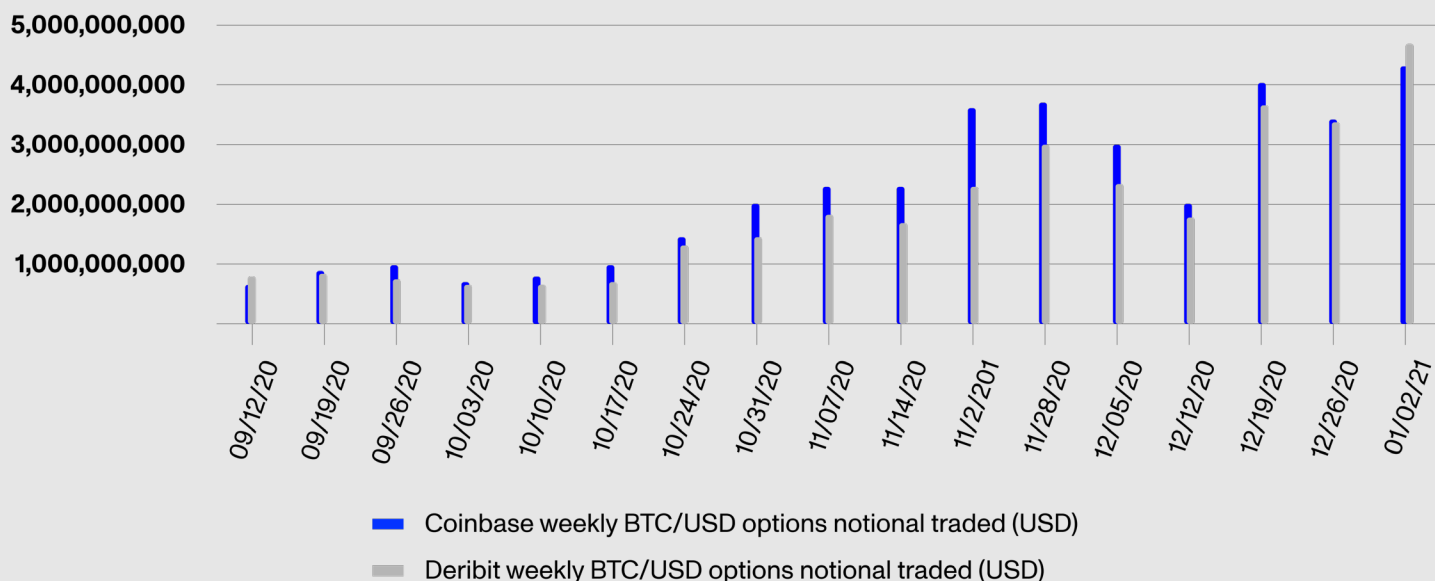
While Q4 2020 provided no shortage of excitement in crypto spot markets, with BTC powering to new all-time highs from an initial low of \$9,800, the crypto options market was a particular bright spot and showed real signs of maturing as a precision hedging and leveraged directional instrument used by both institutional market participants and “whales” alike. Among the major crypto options milestones we observed in Q4:

- The week leading up to Christmas marked the highest options volume ever recorded in digital assets. This included nearly \$5.5bn in options notional traded, compared to previous high weekly volumes of \$2.1bn at the end of July 2020.
- Deribit itself printed over \$1.06bn in options notional traded on December 17, 2020 – which was particularly impressive considering Coinbase spot BTC/USD volumes on that day were \$1.22bn.
- Bit.com, a crypto-native derivatives venue, launched as a competitor to Deribit. For now, Deribit continues to dominate market share with over 82% of volume vs. Bit.com’s 8% and CME’s 3%.
- CME announced that it is expanding its suite of crypto products to include ETH/USD futures and presumably options thereafter.

Q4 Notional Traded:

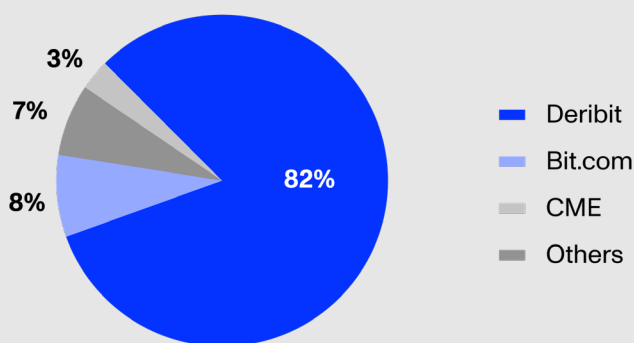
\$4.5B

Deribit Option vs. Coinbase Spot Volume



(Skew.com)

Q4 Options Volume Market Share %



(Skew.com)

At Genesis, our derivatives desk saw +350% quarter-on-quarter volume growth across bilateral OTC and negotiated option blocks to \$4.5bn in notional traded. This growth was driven by increased activity from our existing counterparties alongside new institutional and high net worth individual counterparties using derivatives in a few key thematic ways, which we provide more detail on below. Our counterparty base grew +50% to a triple-digit number of unique active clients. Increased demand also brought more esoteric asset names to our mix – Genesis now supports 20 different crypto assets

Quarterly Growth in Counterparty Base:

50%

for pricing of options risk. While BTC continued to capture the lion's share of our volumes at 80%, ETH demand grew dramatically to 15% of total volume, with the remaining comprising various alts. We address the notable rise in ETH activity below, as we believe certain market structure dynamics contributed to the explosion of risk positioning here.

Thematic Flows

To go into more depth on our thematic flows - the **systematic overwriting** flow was ever-present this quarter, represented by 250-1000 BTC blocks in 1-2 month far OTM strikes. With the increase in vols from the low 50's in Oct. to the high 80's in Dec., overwrite programs gained more traction - typically concentrating on the \$35k to \$50k strikes (+40-90% above to spot). Despite strikes being far OTM, the trade was still attractive for buyers and sellers: directional buyers saw large mark-to-market gains on low-premium calls due to both the near pullback-free nature of the rally and the accompanying rise of implied vols as we broke through all-time highs. (We'll talk more about the demand for these calls below.) Sellers continued to lock in annualized yields of 20-40% per annum for systematic overwrite programs while remaining comfortable getting called out of their BTC risk at take-profit levels. We tend to see more of this flow in OTC format as our collateralization terms can be customized to meet counterparty demand – however, this one-sided flow caused pricing discrepancy between OTC prices for vols and forwards vs. listed markets on Deribit and CME. We saw dealers who became constrained on short vol positions and on-exchange margin requirements back off from OTC bids as they managed the OTC-exchange basis risk.

Any recap of Q4 crypto options activity would be remiss not to mention to the **whale buyer of 29-Jan BTC/USD upside calls**, which was in many ways the flip side of the systematic overwrites. If the Q4 narrative in spot was driven by the emergence of large institutional buyers via TWAP executions (e.g., Microstrategy), the narrative in options was dominated by this singular whale buyer concentrated in the \$32k and \$36k strikes. Their long position was initiated on October 30 in early morning EST. Executing on Deribit via Paradigm's block trading platform, the buyer bought a total of 4,000 contracts

QoQ Derivatives

Trading Growth:

350%

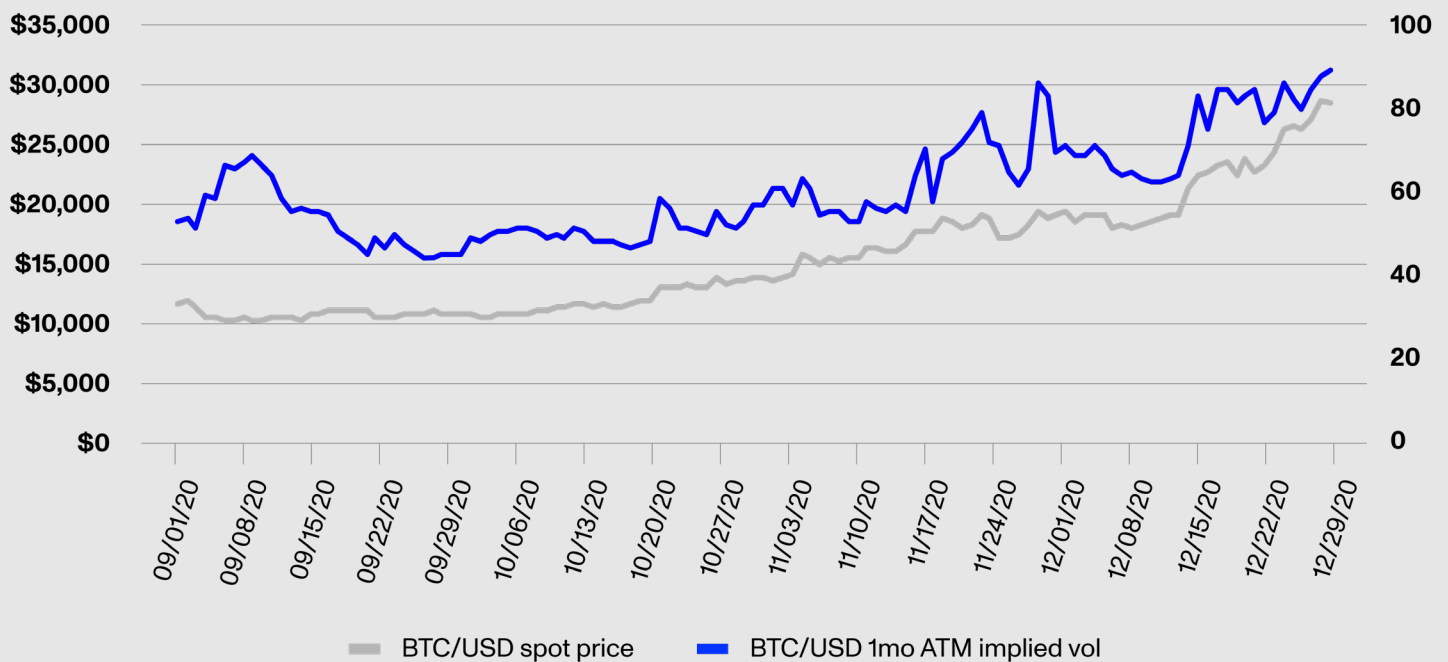
on the \$32k strike and 16,000 contracts on the \$36k strike, paying roughly \$890k in premium. At the time spot was trading around \$13,300 and 30-day realized vol was sub 40 vol, making these strikes seem impossibly far away at +140% and +170% from spot. ATM implied vol was 60 while those far upside strikes traded 84-87 vol. The size of these trades caused a great deal of excitement in the dealer community and some consternation over concentration of risk on Deribit.

There was some thought that short gamma exposure from the seller(s), assuming they were delta-hedging the position, would cause BTC/USD to rapidly shoot to strike if we broke the overhanging resistance levels on the way to BTC/USD ATH at \$20k. In effect, this dynamic, coupled with the relentless corporate and institutional TWAP bid for BTC spot, did drive BTC/USD from \$20k to a high of \$42k in less than a month from mid-December to mid-January. At the same time, mid-market vols on strikes reached a high of 160 before the whale started to unwind and roll their position to higher strikes in mid-January for one of the largest hauls in crypto options history, realizing over \$40mm in P&L.

Strike	Number of contracts (BTC)	Reference BTC/USD spot price	Premium per unit (BTC)	Total premium paid (BTC)	Total premium paid (USD)
32,000	1,000.00	\$13,314.00	0.0047	4.70	\$62,575.80
32,000	1,000.00	\$13,279.00	0.0047	4.70	\$62,411.30
32,000	2,000.00	\$13,292.00	0.0047	9.40	\$124,944.80
36,000	2,200.00	\$13,316.00	0.0030	6.60	\$87,885.60
36,000	1,800.00	\$13,321.00	0.0030	5.40	\$71,993.40
36,000	4,000.00	\$13,281.00	0.0030	12.00	\$159,372.00
36,000	8,000.00	\$13,285.00	0.0030	24.00	\$318,840.00
Total	20,000.00			66.80	\$887,962.90

Source: Paradigm

Spot and Implied Volatility

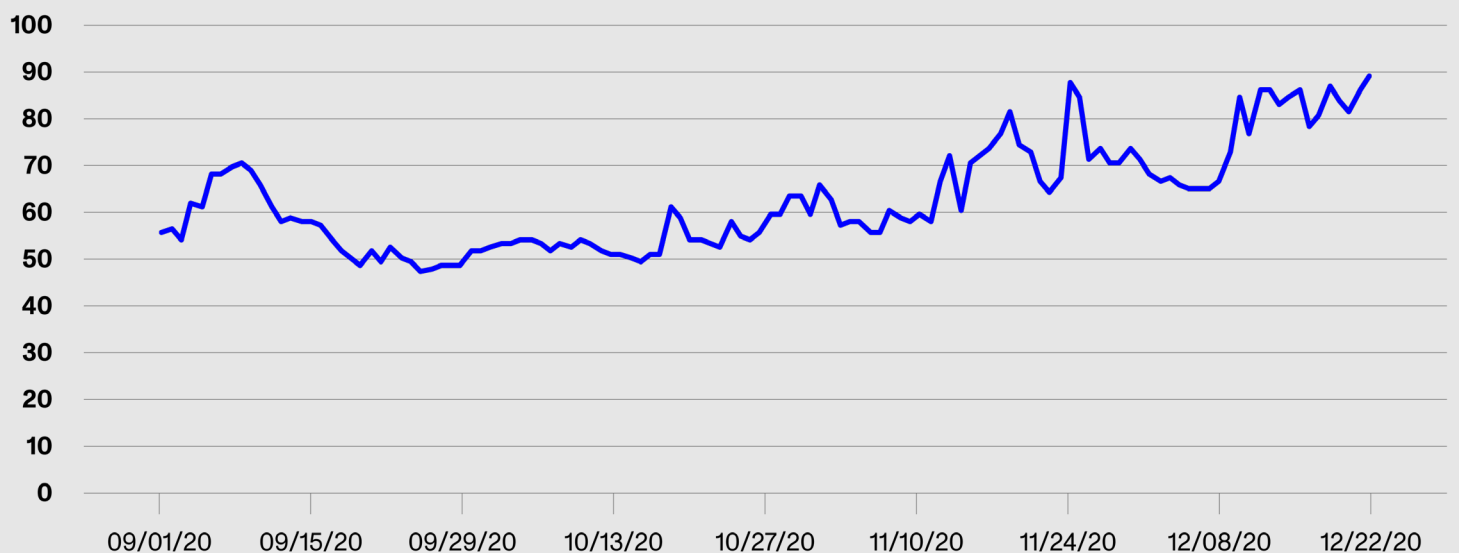


(Skew.com)

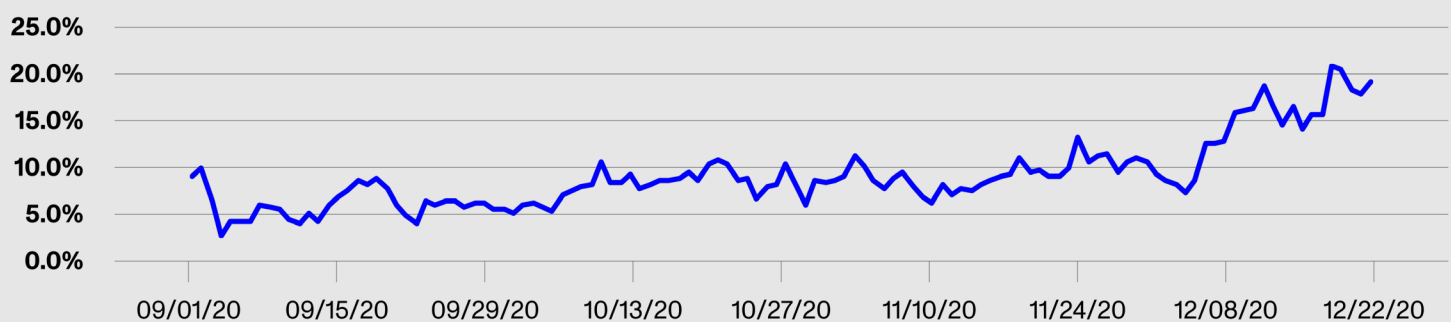
Another major theme for the quarter was the **re-pricing of risk** across product categories. With BTC/USD and most of the crypto complex reaching new all-time highs at the end of Q4, it became apparent we were entering into a new volatility regime, unlike the range-bound trading we had seen over the past few years. Spot BTC entered price-discovery mode to find a new equilibrium where supply would meet surging demand. Because this rally was born from a very low-realized vol environment in Sep and Oct 2020, when 10-day realized was regularly sub 20 vol - and because there was an overhang of call overwrites in the \$12-15k range - it took a long time for implied vols to re-price into this new regime. The insatiable demand for long exposure (and, in particular, the high-strikes in 29-Jan expiry) caused forward curves, implied vols, and upside skew metrics to blow out. By the end of Q4, 3mo rolling basis on BTC/USD widened from 6% to 11%, 1mo ATM implied vol went from mid 30's to high 80's and 1mo skew went from +10% to -20%.

In many ways the explosion in implied vols overshot realized vol, which never exceeded 85 vol over a rolling 30-day window (which extends to today, in mid-January, where implieds are well north of 140 vol.) This widening of implied-realized spread is indicative of a **broader dislocation across OTC and listed options** (CME and Deribit). The widening out of offer-side liquidity on listed venues

speaks to a few constraints facing dealers and liquidity providers. First, there can be major mismatches on OTC collateral terms vs. Deribit and CME, both in % of notional as well as in type of collateral: Deribit only accepts in-kind (BTC for BTC/USD calls), and CME only accepts USD. As cash demand exploded, which was reflected in the widening basis spreads, the imbalance of collateral types and amounts was reflected in the dispersion of implied vol and forward pricing for bullish option trades – generally, CME was more expensive than Deribit, which was, in turn, more expensive than OTC where there was greater supply in overwrites. Second, collateral constraints and exchange exposure limits likely restricted the size at which dealers and liquidity providers could supply vols into listed markets to close the implied-realized spread.

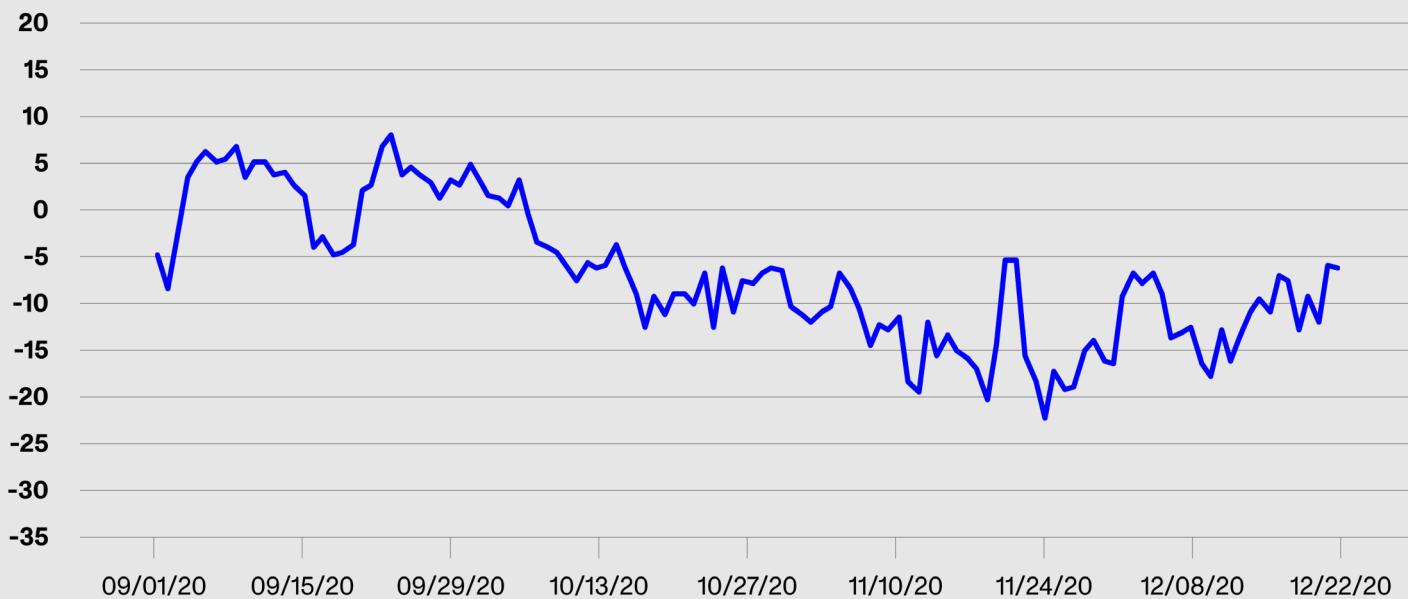
BTC/USD 1mo ATM implied vol

(Skew.com)

BTC/USD 3mo annualized basis %

(Skew.com)

BTC/USD 1mo 25d skew



(Skew.com)

With Q4 closing near all-time highs in spot after three years in the doldrums, Genesis' trading desk saw a strong bid for **downside hedging structures into year-end**. For macro and crypto-native hedge funds, structures primarily took the form of BTC/USD \$15k to \$25k puts expiring in the first two weeks of 2021 -- some specifically looking to hedge against potential tax-selling at the top of the new year. For some Defi-focused funds, hedging in ETH/USD was the primary beta exposure. In total, Genesis traded volumes in several hundred million USD notional of downside exposure across strikes and assets.

Finally, looking forward to Q1, many of our trading counterparties added calls on ETH, which turned out to be extremely perspicacious. There were several primary catalysts for ETH upside going into the new year: 1) demand for spot as a replacement for equitized trust products such as ETHE being liquidated on the secondary market, 2) a drawdown in on-exchange inventory of spot ETH causing supply-side shock panic, 3) a longer-term reduction of ETH free float from trust product creations and ETH2 staking, 4) retail demand for ETH and other legacy top 10 assets as a catch up to BTC and 5) a rotation play away from BTC (and XRP).

In 2021, a major focus for our derivatives desk is to integrate derivatives more directly into the Genesis Prime platform, which already fully incorporates Genesis spot OTC and lending activity. We're planning to roll out innovative pricing and execution products on the platform to automate trade execution and lifecycle management, dramatically streamlining both processes over the course of the year.

4

Macro Environment: Stablecoins

The Rise of Stablecoins and the Potential Macro Impact on Global Money Flows

Every quarter we look to take a step back from our book to highlight a macro theme relevant to our business and global finance. Last quarter we explored the role of expanding bank balance sheets, which we believed were leading to more credit being issued to prime brokerage clients and translating to more USD lending to Genesis as funds flowed down the grapevine. As noted in our Q4 report above, the size of our USD lenders has increased significantly on average since then, which we believe represents more institutional counterparties trading larger blocks. This quarter we want to conduct a deeper dive on the medium of USD settlement - the stablecoin.

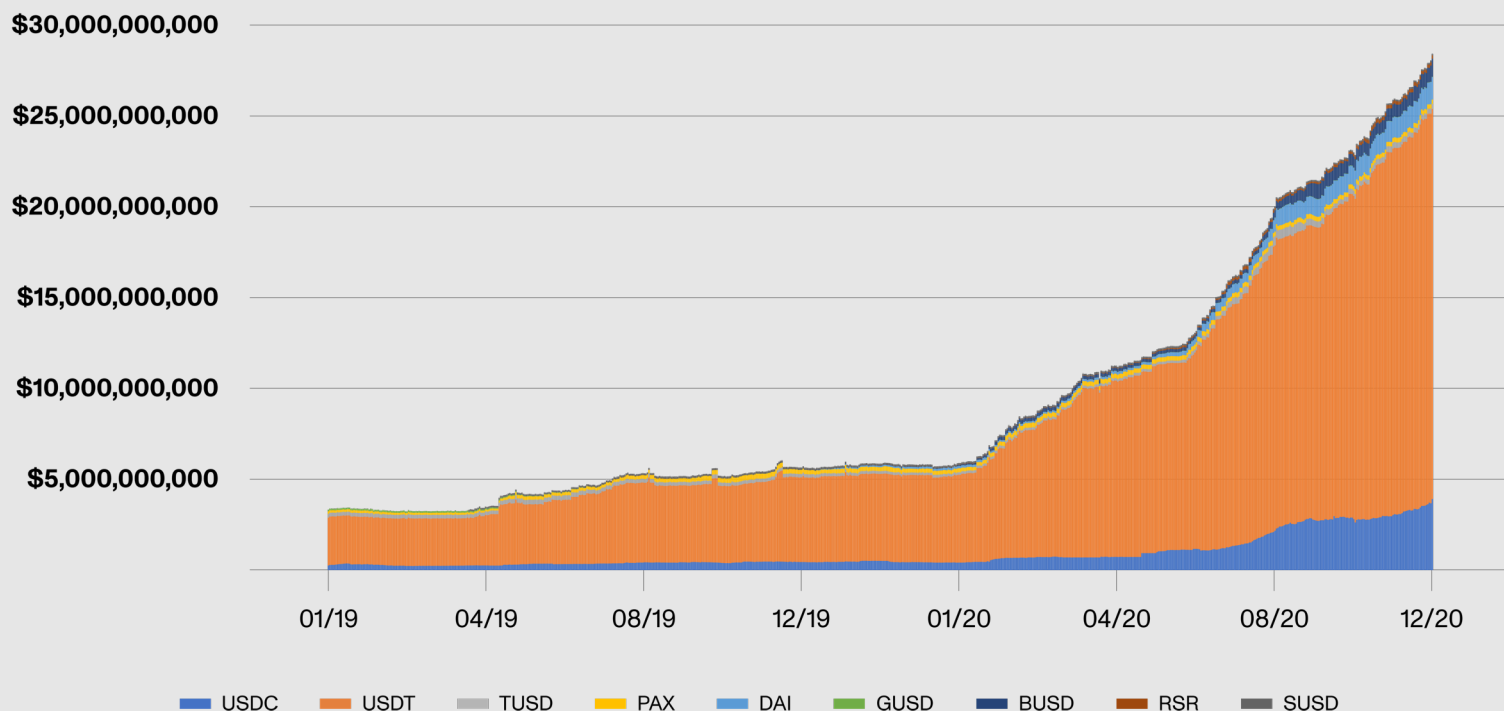
Prior to 2018, USDT was the primary centralized option for stablecoins. There are costs to the flow of creating and redeeming USDT – in practice this means once fiat enters USDT it tends to stick, serving as a one-way onramp for fiat into the crypto ecosystem. Deep liquidity for BTC/USDT pairs across global exchanges made it easy to create and leg into the next asset.

Starting in 2018, PAX, USDC, GUSD, and TUSD evolved the stablecoin landscape by enabling zero cost creation and redemption mechanisms. This impacted the growth of stablecoins in a number of ways. First, stablecoins now had more viable, regulated two-way flows to and from fiat and on-chain. As a result, the breadth of market participants willing to transact expanded significantly. Traditional institutions like public banks and more conservative trading firms were more willing to float balances, receivables and execute trade settlements in newer stablecoins given the efficiency to redeem into the fiat banking system. USDT also experienced positive externalities from this growth, with deeply liquid USDT/USDC and similar pairs expanding on both DeFi and centralized exchanges.

Fast forward to Q4 2020, and the growth of stablecoins has exploded. As of 12/31/20, stablecoins had \$27.5B in total locked float, up from approximately \$2.5B as of 12/31/18, representing a 1,100% increase over two years¹.

¹ Reference: [Messari Stablecoin Index](#)

Stablecoin Majors Market Cap



At the moment, this is a relative drop in the bucket to M1 and other measures of fiat in the traditional banking system, but from a longer-term view - assuming a conservative, two-year linear growth rate - from here, that would lead to \$300B in float by the end of 2023. What might prove to be a more realistic exponential growth rate assumption would see a float pushing \$1T by the end of 2023.

What are the implications of this type of growth in digital dollars? How will central banks react? What risks might arise? We've compiled some thoughts on this below.

First, we believe central banks should get ahead of the inevitable \$1T float figure by incorporating stablecoin data into their datasets. In many ways, this data is cleaner to see, with all transactions

centralized on-chain rather than a mix of fragmented reports. Ultimately, this allows viewing stats like velocity through a more accurate trend and helps make better, more informed decisions.

A macro risk this highlights more broadly is that the pace of regulation and policymaking is not keeping up with the pace of innovation. A key point in the stablecoin growth story has been that it started as a relatively grassroots movement. No central bank greenlit the creation of digital dollars - local governments in various jurisdictions worked with trust companies, private banks, and issuers to create necessary products for continued market evolution. Exploding stablecoin use grew out of product-market fit, and their volumes have encouraged legacy competitors to improve their own transfer mechanisms. Policymakers' stance on stablecoins will be a factor potentially affecting ongoing innovation.

About Genesis

Genesis is a global leader in institutional digital asset markets, facilitating billions of dollars in digital currency transactions on a monthly basis. We provide sophisticated market participants advanced tools to trade spot and derivatives, lend, borrow, and custody digital assets, alongside full-service digital asset prime brokerage services.

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