

Crypto-Backed Lending: Onwards and Upwards?

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WHITE PAPER

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Current global market capitalisation of crypto assets

While admittedly still a nascent market, the worldwide total lending volume against cryptoasset collateral has grown over 10x in 2020 now to upwards of \$15 billion. This is a remarkable increase from a start of \$1 billion at the beginning of the year.¹ All indications point that this lending market is on track to grow again in 2021 given the ongoing upswing in the underlying crypto asset class.

At the time of writing, the global market capitalisation of crypto assets (bitcoin, Ethereum, etc.) is above \$1.7 trillion². This is in excess of the global market capitalisation for the much more established precious metal of silver of \$1.4 trillion. As per Figure 1, with bitcoin alone worth around \$1 trillion, it is roughly 10% of the total global valuation of gold which at the time of publication is \$11 trillion.³ Such sizable valuations for cryptoassets versus the considerably more established major precious metals has sparked considerable institutional interest in the crypto sector, as well as brought forward the development and introduction of a myriad of related financial service offerings including lending against crypto.

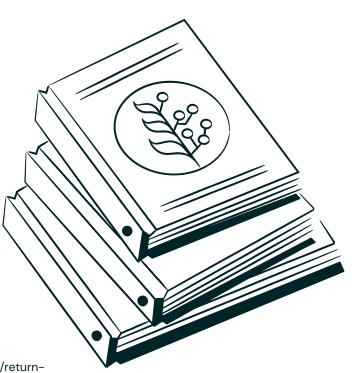
Rank		Name	Symbol	Market Cap	Price	24h	7d	Price (30 days)
1	1	Gold	GOLD	\$11.005 T	\$1,732	0.19%	1.17%	·····
2	Ś	Apple	AAPL	\$2.082 T	\$123.99	2.45%	2.40%	
3	*	Saudi Aramco	2222.SR	\$1.898 T	\$9.49	-0.28%	-0.56%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
4		Microsoft	MSFT	\$1.771 T	\$234.81	-0.40%	0.44%	
5	a	Amazon	AMZN	\$1.552 T	\$3,081	-0.25%	0.61%	~~~~~
6	ø	Silver	SILVER	\$1.431 T	\$26.18	-0.41%	0.61%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
7	G	Alphabet (Google)	GOOG	\$1.389 T	\$2,066	0.22%	0.67%	
8	₿	Bitcoin	ВТС	\$1.028 T	\$55,121	-1.73%	1.94%	<u> </u>
9	1	Tencent	TCEHY	\$804.07 B	\$82.62	0.06%	-3.78%	
10	A	Facebook	FB	\$779.54 B	\$273.75	1.99%	3.01%	M

Figure 1: Bitcoin Valuation in Context (Source: Infinite Market Cap)

1 https://reports.credmark.com/TheCryptoCreditReport-q4-2020.pdf 2 https://coinmarketcap.com/ 3 https://8marketcap.com/

Potential future crypto lending opportunity

To give a rough estimate of where the total lending volumes against crypto might lead in the coming years and given the increasingly used comparison of bitcoin particularly as a form of "digital gold", the existing lending markets against precious metals such as gold could portend a potential future for lending against crypto. According to a 2020 report from KPMG titled "Return of Gold Financiers in India's Organised Lending Market", the total lending market against gold in India, which is one of the most advanced gold markets globally, was worth 5.5% of the total gold valuation in India in 2019.^{4,5} With total lending volumes against crypto currently below 1% of total crypto valuations, the crypto lending market could possibly grow 5x if the lending market against gold is any indication, resulting in a lending market approaching potentially over \$50 billion.



4 https://assets.kpmg/content/dam/kpmg/in/pdf/2020/01/returnof-gold-financiers-in-organised-lending-market.pdf

5 https://www.gold.org/

Firms and service providers servicing the crypto lending market

There are a range of firms and service providers that have stepped into service this emerging crypto lending market. Startup companies designed with lending against crypto in mind such as Genesis, Celsius, Nexo and BlockFi have each loaned in excess of \$1 billion and are well known in the crypto space.^{6,7,8,9} The market has also seen consolidation, as well as bankruptcy, with the likes of Cred going under in 2020 still with over \$100m in client deposits at the time of their announcement.¹⁰ Just as banks do with standard fiat banking (e.g. GBP, USD, EUR), these firms take on crypto deposits and pay interest to crypto depositors from the margin that they receive from crypto borrowers. These firms do not offer the equivalent of deposit protection, akin to the Financial Services Compensation Scheme, nor do they fall under banking regulations as they typically do not have fiat exposure. The usual risk warnings therefore need to be heeded before engaging.

6 https://www.prnewswire.com/news-releases/celsius-crosses-5-3b-in-assets-grows-total-assets-10x-during-2020--301211701.html

 $\label{eq:cond} 7\ https://www.coindesk.com/traditional-lenders-extended-millions-in-loans-to-the-crypto-space-through-genesis-in-q4$

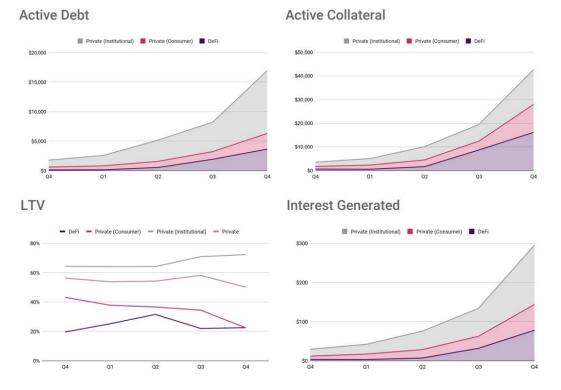
8 https://blockfi.com/blockfi-vs-the-competition-what-sets-us-apart-in-the-crypto-market

9 https://www.businesswire.com/news/home/20201028005868/en/Nexo-Doubles-Earn-on-Crypto-Interest-Rates

10 https://www.coindesk.com/bad-loans-bad-bets-bad-blood-how-crypto-lender-cred-really-went-bankrupt

The growing proportion of DeFi lending against crypto

In addition to specialised lending firms, the proportion of DeFi lending against crypto (Decentralised Finance – or peer to peer financial contracts on the blockchain) is also growing quickly. Crypto lending data provider Credmark publishes a quarterly report detailing the overall breakdown between private institutional (wholesale) and consumer (retail) crypto loan volume, as well as the increasing volume of DeFi lending. An excerpt of this report is in the graph – Figure 2. Unlike centralised lenders which can go bankrupt, DeFi carries its own risks in the security of the code itself, which is possibly vulnerable to hackers, which happened to China's dForce in 2020 with a hack of \$25 million.¹¹ Despite this hacking risk, as the code is public there is considerable transparency in terms of the solvency of the loan itself and it does not rely on a centralised firm successfully running a pooled balance sheet for lending operations. The downside is that without any particular counterparty intermediating the trade there is limited possibility for a user to seek comeback if anything were to go awry with the underlying DeFi code. However, some entities are already looking to offer insurance cover against a DeFi code being hacked, thus mitigating counterparty risk considerations.



Charts (Numbers in Millions | Q4 '19 - Q4 '20)



11 https://decrypt.co/26033/dforce-lendfme-defi-hack-25m

Elements to consider across different crypto lending options

The rates on crypto deposits are relatively attractive in the current low interest rate environment, with rates on some cryptoassets placed with such platforms yielding in excess of 5%.¹² These rates differ at any given moment and platforms such as www.loanscan.io provide an overview of the rates across different collaterals including crypto assets that are linked to fiat known as "stablecoins" see – **Figure 3**. In turn, some of the lowest interest rates seen in the market for example in sourcing USD lending against bitcoin trend towards 4%.

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Platform	USOC	DAI	() ETH	WBTC	BTCF	0 renBIC	SBTC	нытс	a UNI	Platform	USDCL	DAI	O	WBTC	BTC	() renBTC	SBTC	НВТС	U
USD Price 24h change	\$1.00	\$1.00	\$1,584.40	\$48,824.00 +2.4N	\$48,824.00 +2.4%	\$48,824.00 +2.4N	\$48.824.00 +2.4%	\$48.902.00 +4.4%	\$28.32 +10.4%	USD Price 24h change	\$1.00	\$1.00	\$1,565.50	\$48,848.00	\$48,848.00	\$48,848.00	\$48,848.00	\$48,902.00	\$2
d Delio			30.47%		30.47%				1.1	and and a second se									
Bincentive					8.00%				1.1	S Compound	4.02%	7.30%	3.16%	4.02%					8.5
Vauld	11.57%	11.57%	7.23%		7.23%					() InstaDApp	4.02%	7.30%	3.16%	4.02%					8.1
Ø Hodinaut	8.30%	8.30%	6.70%		6.20%				1.1	Aave	6.90%	24.32%	1.50%	0.80%					
Ø Zipmex	10.52%		513%		6.18%					DDEX	7.54%	5.00%	2.00%	2.00%					
E Ledn	12.50%				6.00%				10	Aave, stable rate	8.56%	25.82%	4.88%	4.00%					
S Inlock	9.60%	9.60%	5.16%		5.40%				3.60%	Nexo	11.90%	11.90%							
9 Mode					5.00%				1.0	V Vauld	12.00%	12.00%	8.00%		8.00%				
D Bitwala					4.74%							12.00%	8.00%		8.00%				
BlockFi	8.60%		4.50%		3.20%				1.1	E Ledn	12.00%								

Figure 3: Indicative Borrow Rates for USDC and Lend Rates for BTC (Source: Loanscan)

Comparing rates alone however does not give full colour as to the best fit for a respective loan product. Some key elements to consider across different lending options are as follows:

- LTV: Depending on the source of lending, borrowing terms are generally around 50% loan to value (or "LTV", meaning that the equivalent of 1000 USD in bitcoin collateral would need to be placed to withdraw a loan of 500 USD equivalent). This rate can be higher or lower depending on the crypto covenant or quality of the lender and on the volatility of the specific underlying crypto asset. Typically, the higher the volatility the lower the LTV will be, so that ultimately less can be borrowed against the collateral. LTVs offered by institutional lenders are also considerably higher than loans on other platforms, as per the Credmark report above.
- **Term/Repayment:** The loan term can be anything from daily to up to several years, with generally the lowest interest rates charged on longer-term loans above 1 year. Some lenders offer early payment options or break clauses, whereas again the best terms are generally available where there is no early repayment of the loan.
- Use of Collateral: Lenders have different approaches to the use of collateral, with some using it for their own risk-managed trading during the loan period whereas others keep part or the full amount in cold storage. The former approach allowing some trading generally offers borrowers lower rates of interest, and is structured similarly to securities lending and borrowing in the traditional financial markets.

12 https://loanscan.io/



- Upside Participation or Increase in Collateral Value: Given the volatility in the underlying asset class, particularly more recently with the rise in crypto values, borrowers at times ask for the potential for upside remargining namely the capacity to increase the amount borrowed at certain thresholds if the underlying collateral increases (e.g. in parallel to the housing market, the capacity to remortgage and draw out additional funding should the value of a house increase during the lifetime of a mortgage loan). In any case, generally the borrower is entitled to any appreciation or increase in the value of the collateral upon the repayment of the loan of course should the lender not have defaulted during the loan lifetime and hence the importance of evaluating counterparty risk.
- Margin calls: Several different models have been pursued by such firms for managing their credit risk exposures, with some choosing systematic approaches with automatic close outs of the loans should the value of the underlying crypto collateral fall below a certain threshold – typically well in excess of the LTV offered. While such automatic close outs ensure appropriate risk management for the lending firm, they also can happen relatively quickly. Other lenders offer time for the borrower to make a margin call. If this margin call is not paid within a specified, contractual, timeframe then the position is closed out. These practices were tested in March 2020 when crypto prices collapsed approximately 40%¹³, with some hard close outs happening either systematically or where margin calls were not met within the given timeframes of respective lenders. This did not always leave borrowers pleased in the midst of an upswing in crypto prices soon thereafter. Some other firms offer more flexible margin call terms albeit typically at higher rates, affording borrowers at least a few days' time before they need to fill a margin call (with the lender hedging this exposure in the market to cover their potential losses in the interim).



Conclusion

As the crypto asset market matures, innovations will inevitably continue in lending against crypto and market participants will grow and change. Without having a crystal ball, it does seem that DeFi will increase in relevance, albeit with limits on its acceptance until regulators provide clarity on DeFi treatment within the regulatory perimeter and until some form of standard KYC / AML checks are put in place. It is likely also that traditional banks and lenders will come into the crypto lending space as the margin environment is still relatively attractive. There is considerable opportunity in the crypto lending market, and multiple options including emerging risks and where borrowers and lenders alike should definitely educate themselves and weigh considerations before engaging at any scale.

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