The Crypto Credit Report

Issue 3

Q4 2019 2019 in Review



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Introduction

What mattered in **Q4**:

52% growth across the entire crypto lending industry.

IBA¹ interest rates went up in response to increased demand for institutional liquidity. As a result, consumers put a greater proportion of their assets into these products.

Already known for its eccentric nomenclature, Maker introduced multi-collateral DAI, called it DAI, and renamed single-collateral DAI, SAI.

What mattered in 2019:

Active debt grew 474%.

The crypto lending industry as a whole had a landmark year. Growth was particularly pronounced in Q2 and Q4.

New companies and technologies emerged early in the year which brought new money into the space.

Demand for stablecoins increased throughout the year. Institutions, especially hedge funds and family offices, borrowed stablecoins in order to acquire volatile assets.

DeFi and private company LTVs² were nearly identical at the start of 2019 but diverged significantly. This was the result of increased institutional activity where collateral requirements tend to be lower.

¹ Interest Bearing Accounts. Depositors receive interest on assets deposited into IBAs. These assets are then borrowed by institutions in need of liquidity.

² Loan-to-Value is the value of debt divided by the value of collateral.

Corrections

Following the publication of our Q3 report (https://credmark.com/q3-ccr-issue-2/), we discovered the following errors.

Nexo began serving institutional customers during Q2. We failed to mention the creation of their OTC desk³ and only classified them as a consumer lender.

We mistakenly called **bZx** a "new kid on the block" and stated that it had only been around since June. In fact, bZx (the company) has been around for over two years; their Fulcrum protocol launched in June.

We misspelled the last name of **Unchained Capital**'s founder. It's "Kelly", not "Kelley".

As we collected data for this report, which included new data for the previous quarters, we updated **Q3 numbers** as follows:

- Active Debt: from \$901 MM to \$1,033 MM
- Active Collateral: from \$1,701 MM to \$1,904 MM
- Interest Generated⁴: from \$16 MM to \$17 MM

³ https://medium.com/nexo/nexo-launches-otc-trading-borrowing-and-lending-desk-7dcf0047e0c8

⁴ As stated in Issue 2, we are no longer reporting *cumulative interest generated* since that number alone reveals less information than the series of quarterly snapshots.

Industry Snapshot

Industry | Lifetime

These metrics cover the lifetime of the industry, which began in Q4 2017⁵. This is a cumulative sum of reported industry values over the entirety of the life of each company & protocol.

	2018 ⁶	2019 ⁷	Growth
Loans Originated (value)	\$1 B	\$8 B	700%
Collateral Deposited	\$1.5 B	\$13.5 B	800%
Active Debt	\$273 MM	\$1,568 MM	474%
Active Collateral	\$690 MM	\$2,919 MM	323%
Interest Generated	\$9.8 MM	\$64 MM	541%

Industry | 2019

Overall

	Q1	Q2	Q3	Q4
Active Debt (MM)	\$283	\$839	\$1,033	\$1,568
Private DeFi	\$145 \$88	\$666 \$108	\$798 \$141	\$1441 \$129
Growth		196.4%	23.1%	51.7%

⁵ In late 2017 SALT, ETHLend, Unchained and Maker launched their first products. Internally we call this "the crypto lending big bang".

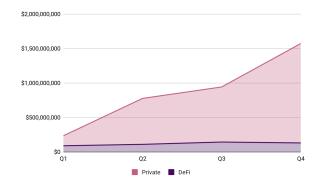
⁶ These numbers are derived from a variety of sources. They represent our "best guess" in the context of our 2019 research.

⁷ These numbers are a sum of publicly available data (DeFi) and vendor-reported data (Private).

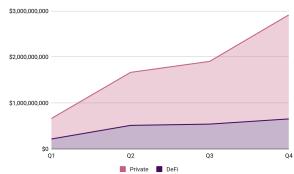
Active Collateral ⁸ (MM)	\$660	\$1,663	\$1,904	\$2,919
Private DeFi	\$446 \$214	\$1,153 \$510	\$1,365 \$537	\$2,263 \$650
Growth		151.9%	14.4%	53.3%
		****	0467	005 5
Interest Generated (MM)	\$6.3	\$14.6	\$16.7	\$25.5
Interest Generated (MM) Private DeFi	\$6.3 \$4 \$2.3	\$14.6 \$11.7 \$2.8	\$1 6.7 \$13 \$3.7	\$23.3 \$22.2 \$3.4

Private vs DeFi

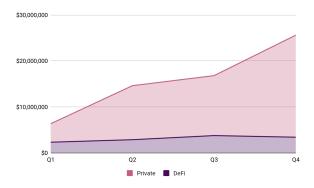
Active Debt



Active Collateral

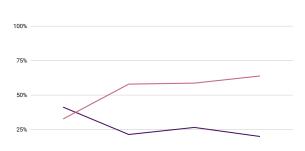


Interest Generated

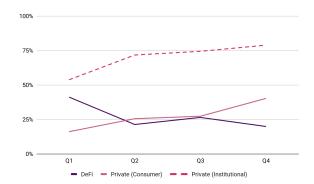


⁸ Sometimes referred to as "assets under management" or AUM.





LTV (Private Institutional vs. Private Consumer vs. DeFi)



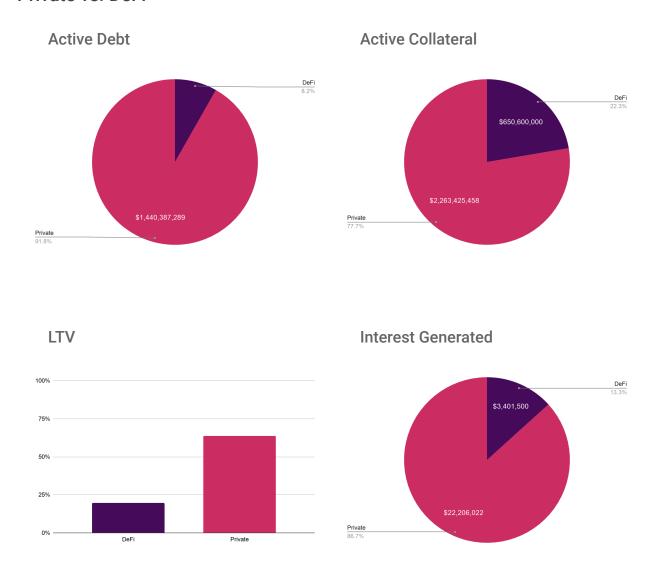
Industry | Q4

Overall

These numbers include public data from DeFi lenders and private data from consumer and institutional lenders. This represents approximately 85% of the market. We have not adjusted our numbers to include the estimated remainder.

	Q3	Q4	Growth
Active Debt (MM)	\$1,033	\$1,566	51%
Active Collateral (MM)	\$1,904	\$2,919	52%
Interest Generated (MM)	\$17	\$24	53%

Private vs. DeFi



Industry | Commentary

The crypto lending industry saw overall growth of 52% in Q4.

Early 2019 saw the emergence of new DeFi protocols and new private lenders. Simultaneously, new products were introduced by existing players. Many of these products matured during the second half of the year. Q2 growth was fueled by new entrants while Q4 growth was fueled by increased institutional lending and recovering crypto prices.

Private and DeFi LTV were nearly identical at the end of Q1 and then diverged sharply. The reason for this change is apparent when we separate private consumer lending from institutional lending. Institutional LTV is higher than consumer LTV⁹. As institutional volumes increased, the combined private LTV diverged from DeFi LTV.

During Q4 money moved from lending to liquidity protocols/products in response to increased institutional demand for liquidity. In DeFi, Synthetix and Uniswap were the primary beneficiaries of this change. In the private sphere IBAs grew relative to other lending products.

Private lending is growing faster than DeFi lending.

⁹ The reason for the difference in collateral requirements is explained below.

Private Lending

For the first time we are reporting consumer and institutional lending as two separate categories 10 .

Note that we use the price of assets at the end of the quarter to calculate USD values.

Private Lending | 2019

	Q1	Q2	Q3	Q4
Active Debt (MM)	\$145	\$666	\$798	\$1,440
Consumer Institutional	\$40 \$104	\$88 \$578	\$125 \$673	\$355 \$1,084
Growth		359%	20%	80%
Active Collateral ¹¹ (MM)	\$446	\$1,153	\$1,365	\$2,263
Consumer Institutional	\$251 \$195	\$345 \$807	\$458 \$906	\$885 \$1,378
Growth		158%	18%	63%
Interest Generated (MM)	\$4	\$11.7	\$13	\$22.2
Consumer Institutional	\$2.4 \$1.5	\$4.5 \$7.2	\$5.3 \$7.7	\$8.8 \$13.3
Growth		191%	11%	70%

¹⁰ In future we hope to increase the granularity of the reported numbers. We are currently considering separating the following:

Asset profile (stable vs. volatile)

[•] Product type (margin vs. rehypothecation vs. liquidity)

Loan term (short vs. long)

¹¹ Sometimes referred to as "assets under management" or AUM.

Charts



Private Lending | 2019 | Commentary

In 2019 crypto lending matured considerably. We saw a number of new entrants such as LendingBlock, Ledn, and Bankera, as well as the introduction of new products by established companies like Nexo and BlockFi.

Despite a slow Q3, 2019 saw healthy growth overall. The Q3 dip/slowdown is correlated to shrinking cryptocurrency prices. Some people have also tried to implicate the disappointing rollout of crypto futures on Bakkt, but we suspect that the resulting enthusiasm dip only affected a small percentage of the community.

Q4 was exciting. Institutional lenders saw their loan books expand significantly, some by over 100%. While part of the gain is the result of recovering asset prices, the remainder has to be attributed to recovering sentiment.

Genesis cited¹² the growing demand for cash and cash equivalents as a major factor in the Q4 surge as many hedge funds, family offices and other trusts look to leverage up on BTC and ETH as all signs point towards a bull market in 2020. The demand for stablecoins grew as we entered the new year. Many firms are rolling out products in an effort to create liquidity for this increase in demand.

In 2019 IBAs became popular. IBA deposits are used to provide institutional liquidity. As demand for liquidity increased, depositors (consumers for the most part) enjoyed better interest rates. From the borrow side we saw early signs that demand for stablecoins is increasing faster than demand for volatile assets as institutions borrowed USD equivalents in order to increase their BTC and ETH positions. This will naturally lead to higher interest rates on stablecoin deposits.

Private Lending | Q4

	Q3	Q4	Growth
LTV	58.52%	63.64%	
Consumer Institutional	27.26% 74.33%	40.18% 78.70%	
Active Debt (MM)	\$798	\$1,440	80.0%
Consumer Institutional	\$125 \$674	\$355 \$1,084	184.0% 60.0%
Active Collateral (MM)	\$1,365	\$2,263	65.7%
Consumer Institutional	\$458 \$906	\$885 \$1,378	93.2% 52.0%
Interest Generated (MM)	\$13.0	\$22.2	70.7%
Consumer Institutional	\$5.3 \$7.7	\$8.8 \$13.3	66.0% 72.7%

¹² https://genesiscap.co/insights/q4-insights-2019/

Charts



Private Lending | Q4 | Commentary

Q4 saw very healthy growth across the private crypto lending sector. The amount of overall outstanding debt increased by 80%. The amount of outstanding consumer debt increased by a staggering 180%.

Changes in collateral volumes tell an interesting story. Consumer collateral increased by 93% while institutional collateral only increased by 53%. This change is reflected in LTV at the end of the quarter: 40% for consumers and 80% for institutions. This stark difference derives from the way collateral requirements are set. Consumer LTV, much like DeFi, is algorithmic. Institutional LTV is influenced by relationships. High levels of counterparty trust can even result in under-collateralized loans.

DeFi

We define DeFi as the collection of permissionless protocols that are built on smart contracts. Their data is publically available on the Ethereum blockchain.

Some of our analysis groups data by protocol types: *lending* and *liquidity*. Lending protocols include Compound, dYdX, Maker, nüo, Aave, and Fulcrum/Torque. Liquidity protocols include Synthetix and Uniswap.

Our 2019 analysis breaks Maker out of the lending group as its dominant position obscured an interesting pattern.

Our Q4 analysis does not include liquidity protocols in order to remain consistent with past reports. This may change in the future.

DeFi | 2019

	Q1	Q2	Q3	Q4
Unique Borrowers ¹³	5,137	7,568	19,474	16,812
Loans (value) (MM)	\$64	\$162	\$233	\$237
Active Collateral (MM)	\$214	\$133	\$462	\$461
Interest Generated (MM)	\$1.1	\$2.8	\$3.7	\$3.3

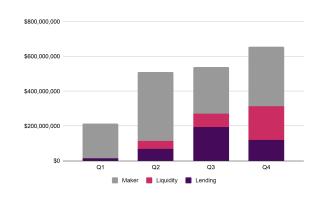
¹³Borrow amounts of more than 2 USD. Does not include liquidity platform users.

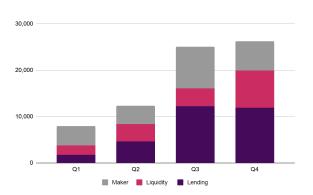
Charts

The following charts divide the industry by protocol type (lending vs. liquidity). Maker is extracted from lending in order to show the flow of assets from lending to liquidity protocols.

Active Collateral (by protocol type)

Unique Addresses

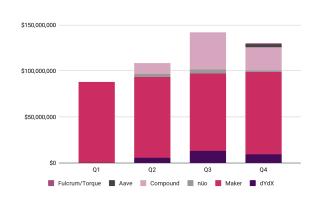


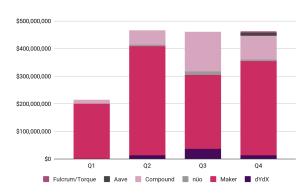


The following charts compare DeFi lending protocols. Aave and Fulcrum/Torque are new entrants in Q4.

Active Debt

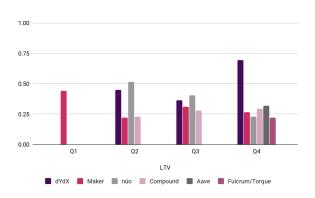
Active Collateral

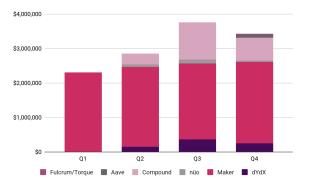




LTV

Interest Generated





DeFi | 2019 | Commentary

2019 was a solid year for DeFi.

Taking liquidity protocols into account, active collateral increased every quarter and is on target to pass the \$1 billion mark in 2020.

Active collateral locked up in lending protocols has not increased since Q2.

2019 was the year DeFi margin trading and derivatives made their debut.

Maker's DAI, the most popular algorithmic stablecoin in the industry, became SAI (single-collateral DAI), and Maker introduced multi-collateral DAI, confusingly called DAI. Despite this naming fiasco, DAI continues to be a critical DeFi building block.

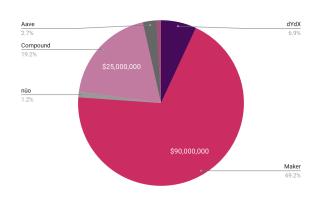
As liquidity protocols began offering better returns than lending protocols, consumers moved their assets to the better-performing class of protocols. This pattern is clear in the *Active Collateral (by protocol type)* chart above.

DeFi | Q4

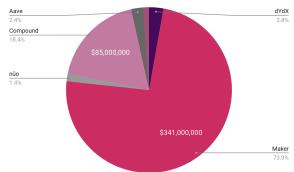
	Q3	Q4	Growth
Unique Borrowers	19,474	16,812	-13.6%
Loans	29,039	20,385	-29.8%
Active Debt	\$141,933,000	\$129,000,000	-9.1%
Active Collateral	\$462,900,000	\$461,600,000	0.0%
Interest Generated	\$3,753,500	\$3,401,500	-9.3%

Charts

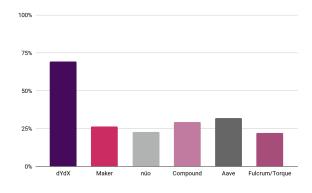
Active Debt



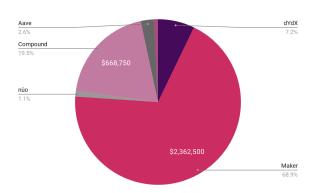
Active Collateral



LTV



Interest Generated



DeFi | Q4 | Commentary

Lending protocols lost users and assets to liquidity protocols.

Overall DeFi protocols did better in Q4 than Q3 but the rate of growth was lower than private equivalents.

New lending protocols Fulcrum/Torque and Aave launched this quarter offering users new options for borrowing assets.

Compound continued to onboard applications like Dharma and Linen. These applications are built on the Compound protocol which is starting to look more like a liquidity platform than a lending protocol.

Closing Thoughts

While researching these reports, we inevitably notice trends before we have data to quantify them, either because the numbers are too small to matter or because we haven't asked the industry to report them.

The role of exchanges and OTC desks in crypto lending is becoming harder and harder to ignore. Their need for liquidity is shaping the industry. **DeFi protocols** like Synthetix and Unisap, **IBA products** from private lenders like Celsius, Cred and BlockFi, and **funds** like Templar¹⁴ and Cryptolend¹⁵ are supplying this liquidity.

We are going to need to start reporting margin volumes and OTC activity in order to present a more complete industry picture.

These dynamics are a good sign. They show that crypto finance is maturing, but we have to recognize that these are still early days.

In order for the industry to continue growing at its current pace, we need more diverse demand for credit. We need more businesses – businesses whose primary activity is not trading! – to be able to issue debt instruments to fuel their growth. And we need consumers to be able to borrow to meet their needs

We also need more transparency, which is ironic.

Digital balance sheets are opaque. Before crypto businesses can raise debt capital, we need to rate their creditworthiness. Before consumers can request unsecured loans, we need to assess their past behavior.

This ground is well-trod in traditional finance. We know how it works. We have a roadmap. DeFi protocols, however, have the ability to significantly alter that roadmap, or create a parallel roadmap altogether. That's why this space is so interesting, and that's why we're going to keep collecting data and trying to understand it.

Until next quarter!

¹⁴ https://templar.fund/

¹⁵ https://cryptolend.net/

Lenders

We currently categorize our lenders as follows: *DeFi* and *private*. Private lenders are further broken down by their target customers: *consumer* and *institutional*.

	DeFi	Consumer	Institutional
bZx Protocol	✓		
Compound	✓		
dYdX	✓		
Aave (formerly ETHLend)	✓		
Maker	✓		
nüo	✓		
Synthetix	✓		
Uniswap	✓		
Bankera		✓	
BlockFi		✓	✓
Cred		✓	✓
Celsius Network		✓	✓
Constant		✓	
Helio Lending		✓	
Nebeus		✓	
Nexo		✓	✓
Ledn			✓
SALT		✓	✓
Unchained Capital		✓	✓
YouHodler		✓	
 DrawBridge			✓
Genesis Capital			✓
Lendingblock			✓
Trinito		✓	

Below, brief descriptions of each lender that contributed in some way to this report. 16

Aave (formerly ETHLend)¹⁷

Aave has completely rebuilt their UI and now feels like it belongs on the playground with the rest of the DeFi project. They have shifted away from ETHLend's P2P model in favor of a pool-based protocol. Liquidity is created by lending assets supplied by their users.

Aave offers users a choice of fixed or variable interest rates.

Bankera¹⁸

Bankera Loans is one of the most accessible loan platforms on the market. Loans start from as low as 25 EUR/USD (which is currently the lowest minimum on the market) and go as high as 1M EUR/USD. The platform also offers a high LTV option of 75%, which currently surpasses the 50% industry standard.

BlockFi¹⁹

BlockFi was an early mover in the crypto lending space, elegantly straddling the traditional vs. crypto finance divide. BlockFi is showing that one possible route to disruption follows regulations meticulously and learns from traditional products.

BlockFi announced the development of BlockFi Institutional Services in October.

The introduction of the IBA account has seen consumer deposits skyrocket over 300%. This gives the firm a much larger pool of assets from which to build their loan book, which in turn gives them a large war chest for institutional lending.

bZx Protocol²⁰

bZx is an open finance protocol designed to support financial applications on Ethereum. bZx enables a large spectrum of lending applications. This is demonstrated by Fulcrum and Torque, developed by the same people who developed the bZx protocol. Fulcrum²¹ enables margin lending and trading while Torque²² provides indefinite, fixed interest rate loans.

¹⁶ Lender descriptions will be moved to the Credmark website and will not be reproduced in future reports.

¹⁷ https://ethlend.io/

¹⁸ https://bankera.com/

¹⁹ https://blockfi.com/

²⁰ https://bzx.network/

²¹ https://fulcrum.trade/

²² https://torque.loans/

Fulcrum launched in June of 2019 with the borrow protocol. Torque was introduced in Q4. We are happy to see the emergence of more DeFi building blocks so that developers can start moving their focus from plumbing to users.

Celsius Network²³

Back in the Middle Ages (mid-2018) Celsius launched IBAs. This was long-before IBAs became popular in the space. The stability and steady returns provided by this product have earned Celsius an enthusiastic fan base. To date, Celsius has distributed over \$10 million of interest to its depositors.

Holders of Celsius' CEL token get better interest rates. This explains why CEL has been one of the best-performing tokens on the market.

Celsius provides liquidity to over 200 institutions.

Compound²⁴

Compound provides market liquidity by allowing people (businesses or other contracts) to deposit tokens into a pool from which others can borrow.

Compound's contracts are continuously audited. Audit results are public. This creates a level of trust that helps explain the rush of services and applications being built on top of the protocol. For example, legacy protocols such as Dharma and new players like Constant are currently using Compound as the underlying contracts for their services. IBA services Linen, Gossamer, Outlet have all adopted Compound's protocol to provide returns for users seeking to stake their stablecoins. Popular DeFi management tools Instadapp, Zerion and Argent use these pools as well.

We love the positive side-effects of composability and expect to see a lot more in the future.

Constant²⁵

Launching earlier this year, Constant has grown very quickly.

Constant has a wide variety of products tailored toward users' different needs. These include peer-to-peer loans in which lenders can choose their own terms, or allow Constant to decide for them for a guaranteed rate. Additionally, they have a wide variety of assets (over 50!) they accept as collateral.

²³ https://celsius.network/

²⁴ https://compound.finance/

²⁵ https://www.myconstant.com/

Constant runs a Medium blog with articles explaining the basics and some advanced DeFi concepts.

Cred²⁶

Cred offers a variety of interest rates on several different tokens. Additionally, possession of Cred's LBA tokens allow users to earn better interest rates on loans. Cred offers lines of credit that have LTV calculations based on current utilization of credit instead of on the originated loan amount.

Cred has a well-deserved reputation as an innovator in the space.

DrawBridge Lending²⁷

DrawBridge Lending is an institutional lender delivering returns to its clients around 8-12% while offering borrow rates as low as 1% against crypto collateral. So far, so normal, but what really sets DrawBridge apart from the crowd is their use of fancy financial engineering to make sure their borrowers never have to suffer margin calls.

They do this by using options to protect their downside in case the value of the collateral falls through the floor. They pay for these options by capping client upside, which they clearly explain in their literature. For their clientele, this is a great way of earning money from their crypto without having to worry about its volatility.

Another important aspect of DrawBridge's strategy is that they don't rehypothecate collateral (i.e., they don't lend it out), so clients don't have to worry about downstream systemic risk.

DrawBridge is the only lender with a license to sell BTC derivatives, which makes them a unique player in the institutional lending space.

dYdX²⁸

The folks at dYdX are an ambitious lot, and they ship product, fast

The dYdX platform, a DEX²⁹ for margin trading, has become popular among traders who seek tools that emulate legacy finance.

Last quarter we said we had a feeling we were going to see a lot more interesting stuff from dYdX. So far, we haven't been wrong.

²⁶ https://www.mvcred.io/

²⁷ https://www.drawbridgelending.com/

²⁸ https://dydx.exchange/

²⁹ Decentralized exchange

Genesis Capital³⁰

Genesis is a big player in the institutional crypto lending space. Thanks to their traditional roots³¹ Genesis has had the insight to solve fundamental problems for the lending and trading industries.

Through affiliate relationships, Genesis is able to provide sophisticated hedging instruments to their clients. The one-stop-shop is appealing to counterparties who aren't interested in dealing with too many moving parts to execute a particular strategy. This has contributed to Genesis' impressive growth since its founding.

Helio Lending³²

Helio Lending is a fully-regulated cryptocurrency lender, based in Australia.

Helio allows borrowers to use cryptocurrency as collateral against fiat or stablecoin loans. They offer 3, 6 and 12 month loans on a 70% LTV basis, with a minimum loan size of \$2,000 and a maximum of \$5,000,000.

Helio offers several unusual loan options including:

- no monthly payment, and
- no margin calls.

In addition, Helio offers a white label solution.

Ledn³³

Ledn is a technology company building financial services for Bitcoin.

It's suite of services is currently comprised of 3 core products:

- dollar loans backed by bitcoin, for users that want liquidity but do not want to sell,
- bitcoin savings accounts, for users that want to earn an extra yield on their bitcoin, and

Genesis Global Trading was founded in 2005. Genesis Global Capital was founded in late 2017.

³⁰ https://genesiscap.co/

³¹ Genesis Global Capital (sometimes shortened to "Genesis Capital" or even "Genesis") borrows and lends digital currencies with institutional counterparties. Genesis Global Capital is an affiliate of Genesis Global Trading, a traditional OTC desk for digital currencies.

³² https://heliolending.com/

³³ https://ledn.io/

• **B2X**, a service that allows users to double the amount of bitcoin they own through the use of a bitcoin-backed loan.

The company has built a technology and operational stack that allows for real-time proof of bitcoin reserves, on-chain. This provides unprecedented transparency for bitcoin financial services.

Lendingblock³⁴

Lendingblock is an institutional lending exchange serving hedge funds, lenders, market makers, custodians, traders and other institutional participants. Regulated by the Gibraltar FSC, Lendingblock's exchange brings clarity and transparency to the institutional lending market, allowing market participants to place orders, view rates and have the entire loan lifecycle managed, including services such as settlement and collateral management.

They reported significant AUM for Q4 which was their first active quarter. With a massive pipeline of counterparties, we expect them to make big moves in 2020.

Maker³⁵

Q4 saw the maturation of Multi-Collateral DAI (MCD) as user began converting their SAI via Maker's conversions smart contract as well as opening new MCD Vaults (formerly known as CDP's) via Makers Oasis app as well as other 3rd party platforms, most notably InstaDapp.

The DSR (DAI Saving Rate) account proved to be exceptionally effective as it has become the industry standard interest rate for DAI.

Nebeus³⁶

Nebeus offers crypto savings accounts and loan facilities. Their products are multilingual and support transfers to over 100 countries.

Nebeus is based at Level 39 in Canary Wharf.

Nexo³⁷

Nexo offers a comprehensive crypto banking account to customers in over 200 jurisdictions. The company has attracted a user base of over 550,000 thanks to its fully automated platform, its

³⁴ https://lendingblock.com/

³⁵ https://makerdao.com/

³⁶ https://www.nebeus.com/

³⁷ https://nexo.io

seamless mobile app, and a \$100M insurance policy on custodial assets provided through Nexo's partnership with the leading custodian BitGo.

Nexo's primary product provides instant crypto credit lines that allow Nexo's customers to always have access to credit in more than 40 fiat currencies and stablecoins. In March 2019, Nexo launched its second product, an IBA that allows its user base to earn up to 8% annually in daily compounding interest on stablecoins, USD, EUR, and GBP.

The upcoming Nexo Card will allow crypto holders to utilize Nexo's instant crypto credit line for instant ATM withdrawals as well as small and large purchases all over the world.

The NEXO Tokens are dividend-paying and asset-backed tokens. The company shares 30% of its profits in the form of dividends with token holders. Until now close to \$3.5M have been distributed to NEXO token holders.

niio³⁸

nüo followed the trends seen in other DeFi protocols as borrow-side demand continues to fall in favor of margin lending and exchange activity.

nüo plans to launch NuoScan in early 2020 in order to provide transparency in their system. Along with that, they will be launching the Nuo Exchange which will give the best swap rates across DEXes.

As funds shift towards exchanges and interest bearing liquidity pools, activity on nuo will be interesting to follow.

SALT³⁹

SALT, the pioneer of crypto-backed lending, launched in 2017 after the company's founders realized crypto holders needed a way to make their crypto assets more liquid. With SALT, individuals and businesses can use their crypto assets as collateral to secure a fiat or stablecoin loan without having to worry about credit checks.

SALT offers flexible loan terms and accepts multiple crypto assets as collateral including cryptocurrencies, stablecoins, and tokenized gold. SALT offers competitive interest rates and does not charge origination or prepayment fees. When you take out a loan with SALT, your assets are held in deep cold storage segregated accounts and are protected by a robust multi-signature process.

³⁸ https://www.nuo.network/

³⁹ https://saltlending.com

As cryptocurrency becomes more widely adopted and additional real-world assets become tokenized, SALT's mission is to offer solutions that make it possible for people to securely hold and borrow against their crypto assets.

Synthetix

The Synthetix platform enables the creation of on-chain synthetic assets representing "real world" assets. This allows users to mint stablecoins that are pegged to the price of fiat currencies or create proxies for commodities and equities.

Synthetic assets allow exposure to the price of the underlying asset.

Trinito⁴⁰

Trinito is a Korean lending protocol that stands out for its transparency. A quick look at the website shows exactly the volumes of supply and borrows broken down by asset.

They are the world's first non-custodial crypto-to-crypto deposit/borrow service supporting four different mainnets BTC/ETH/XRP/Columbus (Terra). They also have some of the lowest borrow rates anywhere in the world.

Unchained Capital⁴¹

Unchained Capital, another pioneer of the crypto lending space, is based in pioneer country: Texas

Unchained has been steadily growing their lending practice since late 2017, but they've clearly been restless. Their Collaborative Custody product (multi-party, multi-sig cold storage) boasts some of the best security practices in the crypto space. This custody solution can be adapted to specific users needs.

When crypto-Twitter insists that third-party custody is anothema it's easy to forget that asset custody is, in fact, a problem that needs solving, no matter your philosophical bent. A lot of people are comfortable keeping a few hundred dollars of cash in their home, but a few hundred thousand tends to give people nightmares. We think Unchained is on the right track.

⁴⁰ https://trinito.io/

⁴¹ https://www.unchained-capital.com

Uniswap

Uniswap is an Ethereum-based protocol that is designed to facilitate automatic digital asset exchange between ETH and ERC20 tokens. Uniswap is completely on-chain, and individuals can make use of the protocol as long as they have MetaMask installed.

Most traditional exchanges maintain an order book and use that to match buyers and sellers of a given asset. Uniswap on the other hand, utilizes liquidity reserves to facilitate the exchange of digital assets on its protocol.

YouHodler⁴²

Incorporated in Switzerland, with an office in Cyprus, and staff throughout Europe, YouHodler is, literally, all over the place. Although crypto is global, people's relationship to crypto is most definitely local. Having feet on the ground in various places is a definite advantage, and YouHodler knows that.

YouHodler provides cash loans backed by crypto at the highest LTV in the industry (90%). They are very borrower-focused, offering one of the lowest minimum-loan amounts in the industry, in addition to several savings accounts products. They accept over 12 options for crypto collateral.

YouHodler sells a unique product called Turbo Loans.

⁴² https://www.youhodler.com/

Data Sources⁴³

Source	Publisher	URL
Defi Pulse	Concourse	https://defipulse.com/
Genesis Report	Genesis	https://genesiscap.co/insights/q4-insights-2019/
Makerscan	InstaDApp	https://makerscan.io
MKR Tools	Mike McDonald	https://mkr.tools
LoanScan Dashboard	LoanScan	https://loanscan.io
Aave Dashboard	Aave	https://aave.com/
Dune Analytics	Dune Analytics AS	https://duneanalytics.com
Synthetix Dashboard	Synthetix	https://dashboard.synthetix.io/
Celsius App	Celsius	https://celsius.network/get-the-app/
Article	Business Wire	https://www.businesswire.com/news/home/2019091000 5976/en/Celsius-Network-Crosses-100-Active-Institution al-Accounts
Trinito Dashboard	Trinito	https://trinito.io/pool
Article	Coindesk	https://www.coindesk.com/25-million-in-2-weeks-blockfi- booms-as-bitcoin-ether-investors-seek-interest
Article	Lendingblock	https://lendingblock.com/guides/collateral-management
Article	dYdX	https://medium.com/dydxderivatives/utilizing-margin-and-leverage-on-dydx-60b34ca8f3cb

 $^{^{\}rm 43}$ In addition to the many vendors who contributed their data for this report. See "Acknowledgements" below for a partial list.

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