



SmartMoney/Enigma Research Note

August 19, 2021

## MAKERDAO (\$MKR)

- **TYPE:** Lending, stablecoin
- **CHAIN(S):** ETH
- **TVL:** \$8.44B
- **FDV:** \$3.52B
- **MARKET CAP:** \$3.15B
- **CONTRACT ADDRESS:**  
0x9f8f72aa9304c8b593d555f12ef6589cc3a579a2

### PRODUCT OVERVIEW/SUMMARY

Before reading this piece, ask yourself this simple question:

How long would it take you to get a personal secured loan of \$25,000? If you're reading this report, my guess would be that it might take you a week, maybe two for a complicated loan.

Now contrast that with someone of average means. How long would it take them to get a secured loan of even \$10,000? A month or maybe two and that's if they are even able to get a loan at all.

What if I told you that regardless of your means, ANYONE can take out a secured loan via the MakerDao protocol by putting up collateral of at least 150% of their loan value in under 5 minutes. Gamechanger, right?

The MakerDao protocol, an algorithmic central bank and credit facility, represents one of the core engines of the decentralized finance (DeFi) system. Born out of a need to have a more decentralized and unbiased stable currency for the issuance of credit, the MakerDao protocol runs a series of smart contracts that manage the stability of the native stablecoin, Dai and the solvency of credit positions on the protocol.

### HOW MAKERDAO WORKS

\$DAI, a stablecoin soft-pegged to the U.S. dollar, is created when a user opens up a new vault, or collateralized debt position, using one of 32 different forms of collateral accepted by the protocol. Each collateral type has a different debt ceiling, or total amount of \$DAI that can be issued to vault owners of that collateral type. In addition, protocol governance sets different parameters including stability fees (interest rates), minimum collateral ratios and liquidation fees to reflect the volatility and risk of the given collateral type.

Like all protocols in DeFi that utilize smart contracts, the financial contracts self-execute once the required criteria has been met by the user.

There is no centralized bank entity and no loan officer. No middleman. Just code.

For example, the software may declare that if you deposit \$130 of \$ETH, you may take a loan of at most \$100. If you fulfill that condition, the software is comfortable issuing a maximum of 100 \$DAI tokens knowing that it can liquidate your collateral if necessary to pay off the loan if its value drops too much, much like a digital asset pawn shop.

In this case, if the value of your \$ETH were to touch \$129, you would face liquidation. The liquidation is triggered by an incentivized user called a “keeper” who scans the blockchain for loans to liquidate. Some amount of the liquidation fee is paid to the keeper for contributing to the health of the protocol and the rest of the fee is sold for \$MKR and burned, similar to a share buyback. After the liquidation fee has been paid, the user is returned the rest of their collateral. Typically, as a user’s collateral fluctuates in value, they may increase their collateral deposit to prevent liquidation, or conversely may take out additional \$DAI as a loan if their collateral is increasing in value.

In the event of a global panic, as was the case in March of 2020 on “Black Thursday”, the volatile crypto assets that collateralize these debt positions can drop so sharply that the auctions are not able to cover the outstanding debt.

Such a situation means that the user debt becomes protocol debt and any losses are covered by a System Surplus Fund, a fund that accrues a percentage of stability fees to a pool that can be used to pay off bad loans. As a backstop, if the surplus fund is insufficient, a Debt Auction will be convened to mint and sell \$MKR, the native governance token of the protocol, to cover the outstanding debt, diluting all \$MKR holders in the process. As a result, all \$MKR holders are incentivized to participate in governance to reduce their credit risk by choosing collateral types and their corresponding debt ceiling, stability fee rate and minimum collateral ratio.

In a situation where there is no collateral to be repossessed and the loan is paid back including interest, stability fees accrue to the surplus fund until they hit a buffer designated by governance. After that target cap is met, a Surplus Auction is initiated during which \$MKR is bought and burned by the protocol, returning value to token holders by reducing supply similar to a share buyback.

The success of this model is reflected in the total value locked (TVL), by which metric MakerDAO remains one of the biggest protocols in DeFi.

Name	Chain	1d Change	7d Change	TVL ↓	Mcap/TVL
1  AAVE (AAVE)		-0.39%	-5.73%	\$12.64b	0.39158
2  InstaDApp (INST)		+2.40%	+19.11%	\$11.8b	0.01134
3  Curve (CRV)		+4.63%	+5.28%	\$11.51b	0.06411
4  Compound (COMP)		+0.34%	-4.49%	\$10.53b	0.22631
5  WBTC (WBTC)		+0.60%	-1.71%	\$8.76b	0.99589
6  MakerDAO (MKR)		-0.18%	-5.55%	\$8.44b	0.37984
7  PancakeSwap (CA...)		+0.98%	+0.03%	\$5.5b	0.82211
8  Convex Finance ...		+0.28%	+5.18%	\$5.39b	0.02006
9  Uniswap (UNI)		+1.27%	-4.37%	\$4.77b	2.81365
10  Lido (LDO)		+9.18%	+27.69%	\$4.71b	0.03115

Chart via DeFiLlama.com

## TOKENOMICS

### Monetary Policy

The \$MKR token is the native governance token of the MakerDao protocol. Its value capture is determined by a combination of its utility in influencing governance in addition to its claim on dividends. All \$MKR token holders are entitled to voting power proportional to their token holdings allowing them to influence any protocol upgrades, choose new collateral types and fine tune risk parameters such as interest rates and collateralization ratios for each collateral type to minimize their risk of dilution related to bad debt. The token holders are essentially governors of the protocol as well as insurers should any black swan event occur. The token holders have certain financial rights as well, given that holders accrue value when the protocol converts excess liquidation fees and stability fees to \$MKR and burns the \$MKR, representing an indirect dividend of sorts.

The protocol started with a total token supply of 1,000,000 \$MKR. While liquidation events on “Black Thursday” led to about a 2% inflation in supply as debt auctions were required to cover bad debt, the protocol has been mostly deflationary since.

The main function of the protocol is to ensure the stability and function of the \$DAI stablecoin and governance has essentially two main levers to pull.

The supply of \$DAI can be adjusted by changing the stability fees (interest rate) on vault deposits. When stability rates are lowered, users are incentivized to take on more debt at low interest rates, thus expanding the supply of \$DAI. As rates rise, users look to pay off their loans, contracting the supply of \$DAI in existence.

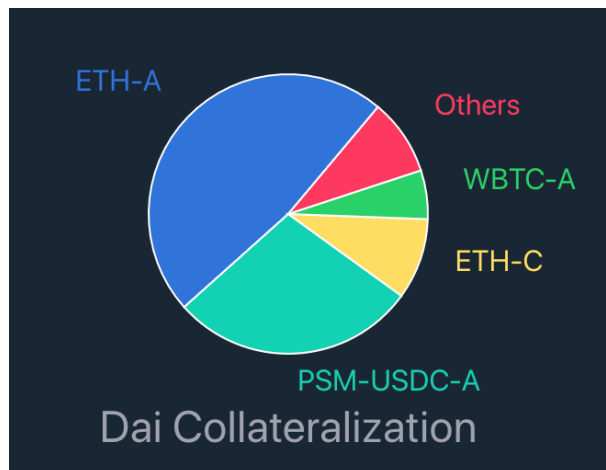


Chart via DaiStats.com

Demand can also be encouraged by tweaking the \$DAI Savings Rate. The \$DAI Savings Rate is like interest on a bank deposit. Increasing the rate essentially increases demand to hold \$DAI while decreasing it reduces demand.

As the majority of revenues come from MakerDao’s core lending business, success comes from carefully managing the spread between stability fees the protocol accrues and the \$DAI Savings rate that it pays out to depositors.

## Why it's interesting

***“The mission of the MakerDAO products and the Maker foundation is to create an unbiased currency for the world, which of course means for everyone all across the world.” - Rune Christensen***

MakerDao is so compelling because it has made a truly credible attempt to compete with central banks by going after the multi-trillion dollar market for a stable decentralized crypto currency that is exempt from arbitrary devaluation.

In addition to competing with central banks to create a global unbiased currency, MakerDao also has created a completely permissionless and transparent credit facility that allows any individual to take out an overcollateralized loan against their crypto holdings.

In order to build an alternative system that avoids past mistakes of financial crises and retains financial inclusion as a core value, it is essential that financial software like MakerDao remains permissionless as well as transparent and auditable on the blockchain.



Chart via DaiStats.com

## COMPETITIVE LANDSCAPE

Drawing the correct competitive boundaries in DeFi is often difficult given that the potential competitive landscape could include many adjacent industries that are fighting for user liquidity. Specific to the lending protocol space, MakerDao is indirectly competing with AMMs that users lend liquidity to, major lending protocols like Aave and Compound in addition to a wide range of competitors in the fixed income space including but not limited to Saffron Finance and Barnbridge who deliver fixed income through tranches and Pendle, Element, ApWine, and Alchemix who all enable users to access or trade future yield in various ways.

Within the stablecoin space, MakerDao competes in a large market currently dominated by fiat-collateralized stablecoins like \$USDC and \$USDT, which have an outstanding supply of \$27.45B and \$64.05B in contrast to the circulating supply of \$5.7B \$DAI.

Furthermore, MakerDao has seen more targeted competition from the likes of Liquity and Abacadabra. Liquidity is a decentralized borrowing protocol that allows you to take out interest free loans against \$ETH in the form of USD pegged stablecoin, \$LUSD. Abacadabra, on the other hand, allows you to stake interest bearing tokens such as a Yearn Finance and borrow the \$MIM (Magic Internet Money) stablecoin against that collateral.

## RECOMMENDATIONS

MakerDAO has some of the strongest fundamentals in all of DeFi. Prior to the industry-wide correction that started in May, the protocol was on track for \$170M in annualized earnings. As the chart below shows

clearly, the correction caused a 10X increase in revenue from liquidation fees, but the massive value of liquidated collateral led to a corresponding 70% decline in revenue from fees. Despite the drop, \$MKR is still on track for over \$50M in annualized earnings.

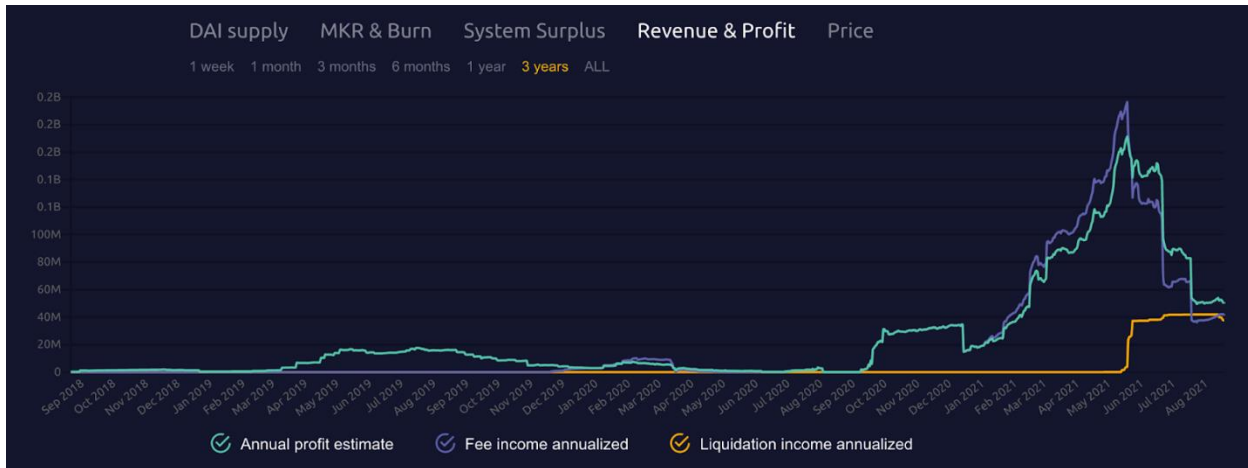


Chart via MakerBurn.com

While the drop resulted in a corresponding increase in P/E ratio, even now trading at 91X, \$MKR remains a buy. With over \$8.4B TVL and smart contracts that are very battle-tested with reliable demand and fee-based revenue, \$MKR has room for growth going forward.

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