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LEVERAGE AND REHYPOTHECATION IN THE CRYPTO MARKET



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WHAT YOU SHOULD KNOW:

Leverage trading is a strategic method to amplify the power of an investor's initial collateral by borrowing capital from brokers to buy and sell crypto stock, yielding returns beyond what the original capital could produce. Similarly, rehypothecation involves banks and brokers using the collateral of their clients for their own transactions, such as collateral for additional loans, to increase their finances. However, as with most things in life, high gains are accompanied by high risks. Using borrowed and rehypothecated capital can multiply returns, but the volatility of the crypto market signifies a great potential for substantial losses as well.

Leverage Trading

- As an example of leverage trading in action, let us examine an initial \$1,000 collateral. A 5X leverage with that collateral will provide a buying and selling power of \$5,000, a 10X leverage will have the power of \$10,000, and so on. If the value of a \$10,000 investment with a 10X leverage on \$1,000 collateral increases by 20%, the investor claims a profit of \$2,000, which is significantly greater than the \$200 that would have been earned without the leverage. However, if the market moves against the investor, the value of the investment would need only to drop 10% to trigger liquidation.
- The higher the leverage, the higher the risk of liquidation for the account and the smaller the volatility tolerance. Though most major cryptocurrency exchanges offer leverage trading, many have lowered leverage limits from 100X to 20X, such as Binance and FTX. Binance CEO Changpeng Zhao marks the new limitations as done "in the interest of Consumer Protection".

Quantifying Leverage in the Crypto Market

- One way to gauge the leverage in the crypto market is by examining the open interest in the futures market. As of May 12, that value stands at \$1.65 billion USD [FIGURE 1].
- Another method to estimate the amount of leverage is through the estimated leverage ratio (ELR), which is calculated through the ratio of the open interest over the amount of the reserve. The resulting value represents the degree of leverage that exists relative to market size.

- The ELR of Bitcoin on all exchanges recently reached an all time high of 0.275 on May 2nd, though has since decreased to 0.245 as of May 12 following the plunge of Bitcoin's market value from \$37,723 to \$29,238 USD on those respective days [FIGURE 2]. The value of 0.245 is nonetheless high when compared to historic levels, indicating that the amount of leveraged investments are large relative to the market size.
- Leverage in the market makes the ecosystem more volatile. A high degree of leverage can influence price fluctuations driven by liquidations or deleveraging events. Naturally, the fall in BTC price paired with the high degree of leverage led to mass liquidations along longs and shorts in the last week. May 8 saw a total of \$202.87M in shorts and \$799.73M in total liquidations within a 24 hour period [FIGURE 3]. These liquidations likely factored into the observed decrease in ELR. With more predicted liquidations resulting in BTC's currently decreasing market price, ELR is expected to keep decreasing until BTC price increases anew.
- Leverage trading can be done not only with cryptocurrencies like Bitcoin used as collateral, but also with non-fungible tokens (NFTs) decentralized finance (DeFi) tokens, and other forms of virtual assets on the blockchain.

Risk Reduction in Leverage Trading

- Investors looking to trade with a leveraged position can set up a “stop order” on the crypto exchange to prevent liquidation. When establishing a stop order, an investor predetermines a stop price, sell price, and size. If the market price of the asset reaches the stop price, the stop order will automatically sell the set size of the investment at the sell price set by the investor. This act limits potential losses and can mitigate the chance of liquidation.
- Integral FIVE, a decentralized exchange (DEX), uses a leveraged automated market maker (AMM) model to execute whale trades. To mitigate risk, the platform uses a time-weighted-average-price (TWAP) strategy that segments a large trade order to several smaller orders over a period of time, executed at an average price across the interval []. By doing so, price impact is reduced and it allows liquidity to recover if the price has dropped.

Rehypothecation in the Crypto Market

- Rehypothecation likely brings to mind Lehman Brothers and the housing crash of 2008. As such, rehypothecation with crypto assets is a polarizing topic as one camp views the unique characteristics of digital currencies as able to overcome the shortcomings of the same process in traditional financial markets, while another camp believes that these very characteristics make cryptocurrencies and rehypothecation a dangerous combination. What makes cryptocurrencies different is the quick transaction times, transparency of the blockchain platform, and the ability to entrust transactions to smart contracts rather than human intermediaries. The Secure and Fair Enforcement for Mortgage Licensing Act ("SAFE Act"), the government's response to the 2008 mortgage crisis, renders unlikely another crisis of this type, though as of now there is no similar law in place for the crypto market.
- Quantifying the degree of rehypothecated crypto collateral in the market is a complicated endeavor, a notion which is also true for traditional collateral. One estimate used regulatory data collected by the Federal Reserve to determine that dealers use one security on average six to seven times []. Due to the current lack of regulation in the crypto market, repeating the same process to identify the degree of rehypothecated crypto collateral is near impossible as of now.

Total Value Locked

- Total Value Locked (TVL) is a ratio calculated by first multiplying the circulating supply of an asset by the current price to find the market cap. Then the market cap is divided by the maximum supply of the asset multiplied by the current price. This value is used to identify how much of an asset value is 'locked' or staked on DeFi services.
- The TVL of a DeFi asset can indicate whether it is over or undervalued, with higher values indicated a more active market.
- DeFi Llama, one of the leading TVL tracking services, shows that on May 13 the total TVL was approximately \$148 Billion USD, having seen a 10.95% decrease in 24 hours [FIGURE 4]. We can also see on this platform which projects are experiencing growth. The network that has more total value for now is Ethereum.
- As another example, if we want to analyze the Cardano network, we can see the ranking of each protocol: the first one is Minswap, which is similar to how Pancake Swap works [FIGURE 5]. Minswap has 60.9m of TVL, so it is currently undervalued as it is less than 1 [FIGURE 6]. The dataset is available on DeFi Llama to make any daily transaction analyses.



Analyst Certification

I, Alexander Hernandez Romanowski, hereby certify that the views about the companies and securities discussed in this report are accurately expressed and that I have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report.

APPENDIX

FIGURE 1



FIGURE 2

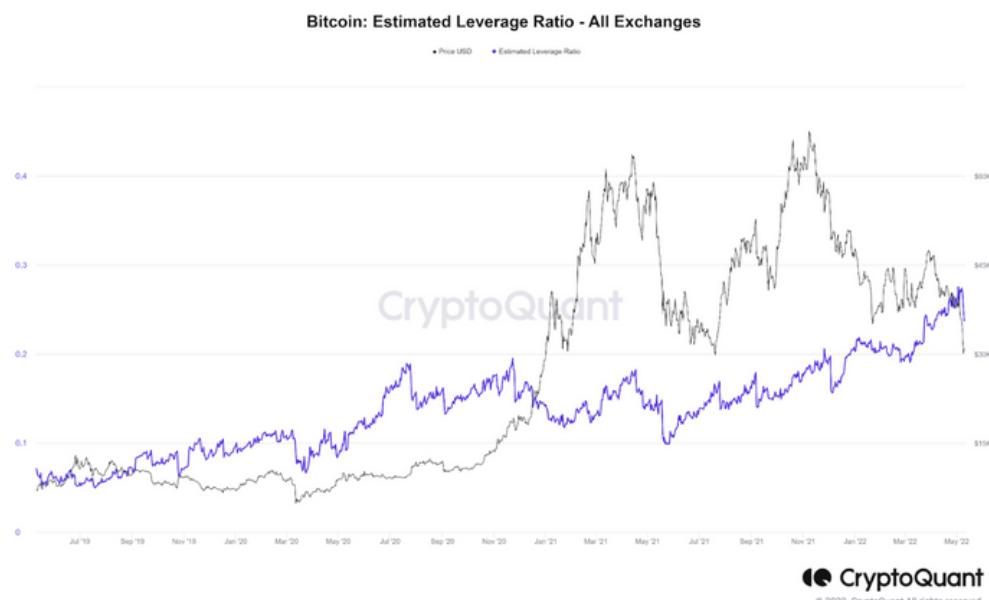


FIGURE 3



APPENDIX

FIGURE 4



FIGURE 5

Name	1d Change	7d Change	1m Change	TVL	Mcap/TVL
1 Minswap (MIN)	-6.72%	-34.71%	-46.51%	\$60.9m	
2 WingRiders (WRT)	-5.13%	-42.09%		\$32.55m	
3 SundaeSwap (SUNDAE)	-7.08%	-35.64%	-48.88%	\$29.95m	
4 Meld (MELD)	-5.16%	-47.98%	-61.02%	\$22.62m	
5 MuesliSwap (MILK)	-5.53%	-47.37%	-62.01%	\$4,550,113	
6 VyFinance (VYFI)	-5.78%	-40.91%	-42.54%	\$3,316,345	
7 Revuto (REVU)	-7.68%	-32.82%	-25.82%	\$2,080,155	1.51814

FIGURE 6

