Crypto Exchange Liquidity Report

2024 Q1

TokenInsight APP

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Table of Content

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01. Crypto Exchange Liquidity

1.1 Core Concept

1.1.1 Liquidity

In the crypto world, liquidity refers to the ability to quickly buy or sell assets in the market without affecting the stability of asset prices. In other words, it is the ability to quickly convert specific assets into other assets or cash.

" For example, Jack owns 3 BTC, and the price of BTC has been rising in the past few days. Jack is happy and decides to quickly sell all his BTC at the current market price.

If the market has sufficient liquidity, Jack can quickly sell his BTC at a price he is satisfied with because there are enough buyers willing to buy his BTC at the current market price, and this transaction will not have a significant impact on the current market price of BTC. This means Jack can sell his BTC at a higher price, and the transaction can be completed quickly.

However, if the market liquidity is insufficient, Jack may need to wait longer to find buyers willing to buy his BTC at the price he requests. Or he may need to lower his asking price to complete the transaction. In extreme cases, if market liquidity is very low, Jack may not be able to sell his BTC at a price he is satisfied with at all, or the transaction may take a long time to complete.

Therefore, the liquidity and price of cryptocurrencies are greatly influenced by market liquidity. Assessing and analyzing the liquidity on different exchanges are indispensable to crypto market analysis.

1.1.2 Importance of Liquidity

Liquidity is far more important in the crypto market than in the traditional market. In a traditional market, the global currency system is relatively mature, with major currencies such as the USD, GBP, and EUR having high liquidities. Additionally, large financial institutions act as market makers, providing ample liquidity for trading, and resulting in relatively stable asset prices.

However, in emerging crypto markets, mature assets and large market makers are relatively scarce, making it challenging to achieve optimal liquidities. Even the most popular cryptocurrencies like Bitcoin can experience significant price fluctuations due to market sentiment or various other potential factors.

It's widely understood that there is a close correlation between liquidity and price volatility. When liquidity is limited, trading within existing orders may cause asset prices to rise or fall rapidly, thus low liquidity normally increases price volatility. At the same time, widening bid-ask spreads may contribute to increased price volatility, further reducing the overall liquidity.

Generally, ample liquidity leads to lower price volatility, reflecting more rational asset pricing and a more stable market. It also contributes to faster execution of trades. Conversely, insufficient liquidity can result in the market being unable to effectively absorb large orders, thereby increasing the likelihood of price volatility and market instability.

Therefore, analyzing liquidity is crucial in the crypto field. This report introduces numerous important liquidity indicators and conducts an in-depth analysis of liquidity across different trading platforms. It can help traders better understand how the market operates and make wiser trading decisions.

1.2 Core Indicators for Liquidity Analysis

1.2.1 Trading Depth

Trading depth refers to the depth of trading activity for a specific cryptocurrency on a trading platform, indicating the quantity of buy or sell orders that can be fulfilled within a specified price range over a specific period of time. It is typically divided into buy-side depth and sell-side depth.

Deeper trading depths normally imply that the market can accommodate a larger volume of orders, leading to higher price stability, lower volatility, and higher market liquidity. Additionally, lower transaction costs and reduced risk of price manipulation are often associated with deeper trading depth.

Two important indicators for measuring trading depth are the number of orders placed and the spread between adjacent orders. A larger number of orders indicates higher market liquidity and trading activity, while a smaller spread between adjacent orders indicates smaller price discrepancies between buy and sell orders, facilitating trade execution.

1.2.2 Bid-Ask Spread

The bid-ask spread refers to the difference between the highest bid price and the lowest ask price in the order book for a specific asset. The bid price represents the price at which buyers are willing to pay to acquire the asset, while the ask price represents the price at which sellers are willing to accept.

The bid-ask spread is an important indicator for measuring trading costs and liquidity in different markets. A smaller bid-ask spread indicates higher price stability, greater market liquidity, improved trade efficiency, and lower transaction costs.

1.2.3 Trading Volume

Trading volume refers to the total volume of all executed orders within a certain period in the order book. In the historical order details on exchanges, the total order volume and the volume executed are typically displayed separately. The total order volume represents the expected volume before traders place an order, while the executed volume represents the actual quantity traded. When the executed volume equals the total order volume, the order is considered fully executed.

Since the total order volume may be large, orders may be split into several smaller orders and executed sequentially. Therefore, the executed volume usually displays the execution price and quantity, and their product represents the total volume of executed orders, which is the trading volume. A higher trading volume within a certain time interval indicates a higher speed of order execution and a greater number of executed orders, indicating better trading liquidity.

1.2.4 Slippage

Slippage refers to the difference between the actual execution price and the expected execution price of a trade. It is more common in markets with high volatility and insufficient liquidity. Typically, slippage occurs when there is a delay between placing an order and executing it, causing changes in the asset's price.

Slippage generally moves in a direction unfavorable to the trader, with negative slippage being more common, resulting in additional losses during trading. In general, the poorer the market liquidity, the higher the slippage, and consequently, the higher the trading costs for traders.

Different assets exhibit varying levels of slippage. Assets with high volatility and limited liquidity, such as many meme coins, tend to have higher slippage, while mainstream cryptocurrencies with high and stable liquidity, like Bitcoin, generally have relatively lower slippage.

1.2.5 Trading Fee

Trading fee refers to the fee charged by an exchange to traders during transactions. It is typically divided into Maker and Taker fees and varies based on the trading volume. Trading fees also have an impact on trading liquidity to some extent. Therefore, exchanges need to strike a balance between liquidity and revenue through reasonable pricing. Generally, lower trading fees result in lower trading costs for users, meaning higher trading activity, better market depth, and improved liquidity.

02. Liquidity Comparison

2.1 Methodology

2.1.1 Exchanges

This report compares 7 exchanges in the derivatives sector based on their 24-hour trading volume and rating rankings from TokenInsight's official website. These exchanges are all leaders in the industry, with excellent historical performance and activity, and they can partially illustrate the overall derivatives liquidity situation in the crypto exchange narrative.

▸ **Exchanges List**
Source: TokenInsight

Derivatives Exchange	Launched Time	Rating
Binance	6 years	AA
OKX	6 years	A
KuCoin	6 years	BBB
Bybit	6 years	BBB
Gate.io	11 years	BBB
BloFin	3 years	BB
HTX	10 years	BB

The selection logic for spot exchanges is consistent with that of derivatives. We have selected 8 exchanges for comparison, and the list is as follows:

Spot Exchange	Launched Time	Rating
Binance	6 years	AA
OKX	6 years	A
Bybit	6 years	A
Coinbase Pro*	11 years	A
Kraken	12 years	BBB
KuCoin	6 years	BBB
Gate.io	11 years	BBB
HTX	10 years	BB

*As we are unable to access data from Coinbase, the trading data used in this report is sourced from Coinbase Pro. It's important to note that Coinbase Pro is an exchange tailored for professional traders by Coinbase, and its liquidity may not directly represent that of Coinbase.

2.1.2 Coins

This report covers BTC, ETH, and SOL, three mainstream cryptocurrencies nowadays, for liquidity analysis. BTC, as the cryptocurrency with the largest market capitalization and highest trading volume, is best suited to reflect the liquidity situation and the level of trading activity in the crypto market. ETH, as the native asset of the leading smart contract platform Ethereum, enjoys high recognition and popularity, second only to BTC. Finally, SOL, as the native asset of the most popular public blockchain apart from the Bitcoin and Ethereum networks, also holds significant research value.

2.1.3 Time

In this report, all selected data covers the time range from GMT+8, March 21, 2024, 0:00 AM to March 27, 2024, 11:30 PM. We collected order book data and historical trading data for the selected exchanges for one week, capturing data every half hour. A total of 336 data points were recorded for metrics such as trading depth, bid-ask spread, order execution trading volume, and slippage. Due to varying data acquisition rules among exchanges, the data used for analysis in the report only reflects the liquidity levels of the exchanges during this specific time period, and some data may only reflect partial depths and liquidity situations of the exchanges.

2.2 Derivatives Analysis

2.2.1 Derivatives Trading Depth

TokenInsight has compiled statistics on the average depth of the BTCUSDT, ETHUSDT, and SOLUSDT trading pairs across various exchanges at price intervals of 0.1% and 0.3%. The results are as follows.

▸ **BTCUSDT Trading Depth (USDT)**

Source: TokenInsight ■ 1st ■ 2nd

Derivatives Exchange	0.1% Depth		0.3% Depth	
	Bid	Ask	Bid	Ask
OKX	12,300,987.3	12,145,371.7	29,226,818.3	28,852,640.9
Binance	12,205,622.9	11,689,097.5	37,271,414.7*	36,231,284.3*
Bybit	10,260,045.1*	10,585,319.9*	-	-
BloFin	3,308,444.8	2,916,762.1	6,642,023.3	6,866,644.5
Gate	2,403,030.2	2,450,388.7	7,292,983.3*	7,144,293.3*
HTX	2,961,196.3	4,060,588.6	5,570,325.4	6,558,385.5
KuCoin	2,342,950.6*	2,342,950.6*	-	-

* Due to limitations in exchange data APIs, actual depth data for some exchanges could not be obtained. The data presented here is estimated through various analyses and is provided for reference only. "-" indicates that the estimated results may significantly differ from the actual situation, and hence are not provided at this moment.

From the perspective of BTCUSDT contract trading depth, Binance and OKX are notably better than other exchanges, ranking first and second, respectively. OKX outperforms Binance in the 0.1% depth, demonstrating good liquidity. Although OKX may appear slightly inferior at the 0.3% depth, its overall depth performance remains impressive.

Bybit performs well at the 0.1% depth, and although it's challenging to estimate its performance at the 0.3% depth due to data interface issues, it can reasonably be assumed that Bybit maintains strong depth in other depth intervals, placing it in the top tier as well.

Among other exchanges, BloFin demonstrates quite good depth performance, showing strong performance at both depth levels. This indicates that BloFin can also provide good trading depth for medium to large traders. For users requiring large-volume trades, BloFin is a viable option to consider.
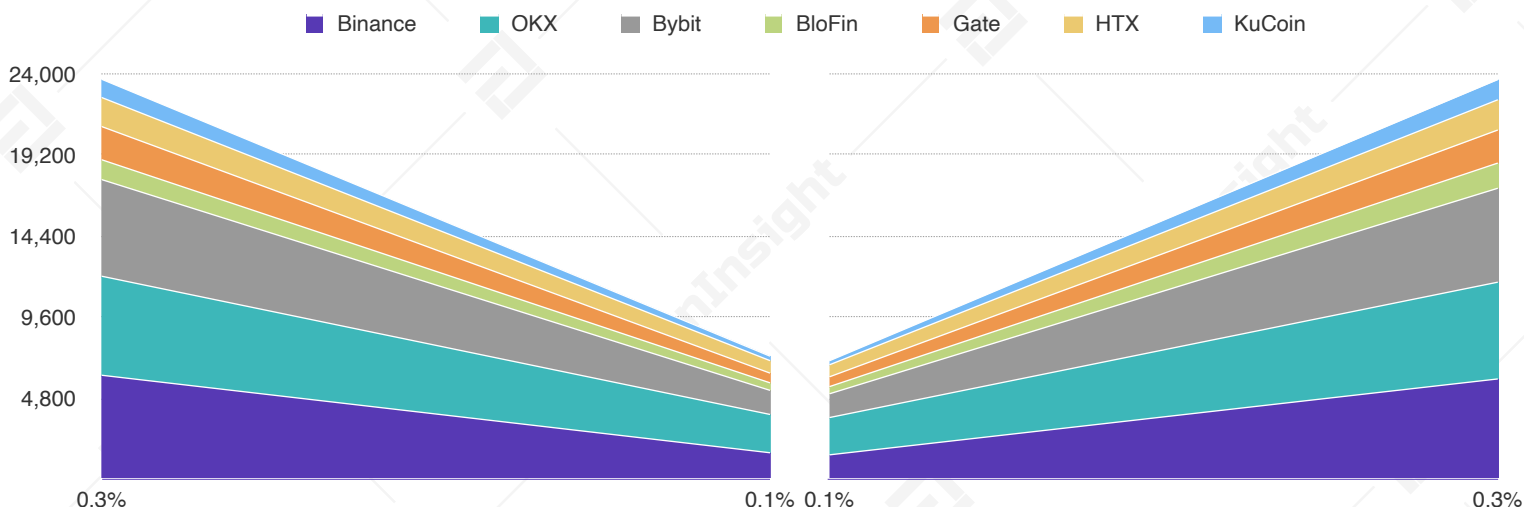
‣ ETHUSDT Trading Depth (USDT)

Source: TokenInsight

■ 1st ■ 2nd

Derivatives Exchange	0.1% Depth		0.3% Depth	
	Bid	Ask	Bid	Ask
OKX	7,886,112.5	7,685,050.2	20,344,189.5	19,939,879.3
Binance	5,434,982.1	5,009,344.1	21,351,386.4	20,661,883.4
Bybit	4,954,374.2	4,887,269.6	19,859,045.4*	19,370,608.4*
BloFin	1,543,281.8	1,477,332.4	4,081,178.3	5,192,387.7
Gate	2,004,004.7	2,019,001.0	6,812,531.2	6,810,879.8
HTX	2,572,264.2	2,485,846.1	5,960,755.2	6,224,006.3
KuCoin	918,361.0	1,119,933.0	3,752,258.9*	4,171,877.4*

‣ ETHUSDT Trading Depth (ETH)

Source: TokenInsight

■ Binance ■ OKX ■ Bybit ■ BloFin ■ Gate ■ HTX ■ KuCoin

* Due to limitations in exchange data APIs, actual depth data for some exchanges could not be obtained. The data presented here is estimated through various analyses and is provided for reference only.

With regards to ETHUSDT, Binance and OKX continue to demonstrate outstanding performance, ranking first and second, respectively. Similar to the BTCUSDT trading pair, OKX outperforms Binance in the 0.1% depth, with a more significant difference, indicating OKX's competitive advantage in near depths. However, OKX still lags slightly behind Binance at the 0.3% depth, reflecting Binance's depth advantage, particularly in the deeper depths.

Bybit also performs well in ETHUSDT trading depth, although it slightly trails behind the top two, it remains at a high level. Gate's performance is moderate at the 0.1% depth, but it surpasses a few exchanges at the 0.3% depth, indicating its competitiveness in deeper depths.

‣ **SOLUSDT Trading Depth (USDT)**
Source: TokenInsight

■ 1st ■ 2nd

Derivatives Exchange	0.1% Depth		0.3% Depth	
	Bid	Ask	Bid	Ask
Binance	976,659.5	962,963.9	3,771,283.1	3,575,724.9
OKX	833,657.4	832,415.2	3,122,506.6	3,033,046.3
Bybit	801,946.7	825,101.2	3,198,344.7	3,323,915.6
BloFin	775,937.9	784,984.9	2,463,901.2	2,463,825.3
Gate	243,845.4	242,314.3	1,251,804.5	1,286,351.7
HTX	262,896.7	260,853.8	1,058,208.1	1,077,055.3
KuCoin	252,897.5	251,675.1	1,008,612.4	1,004,962.8

‣ **SOLUSDT Trading Depth (SOL)**
Source: TokenInsight

■ Binance ■ OKX ■ Bybit ■ BloFin ■ Gate ■ HTX ■ KuCoin
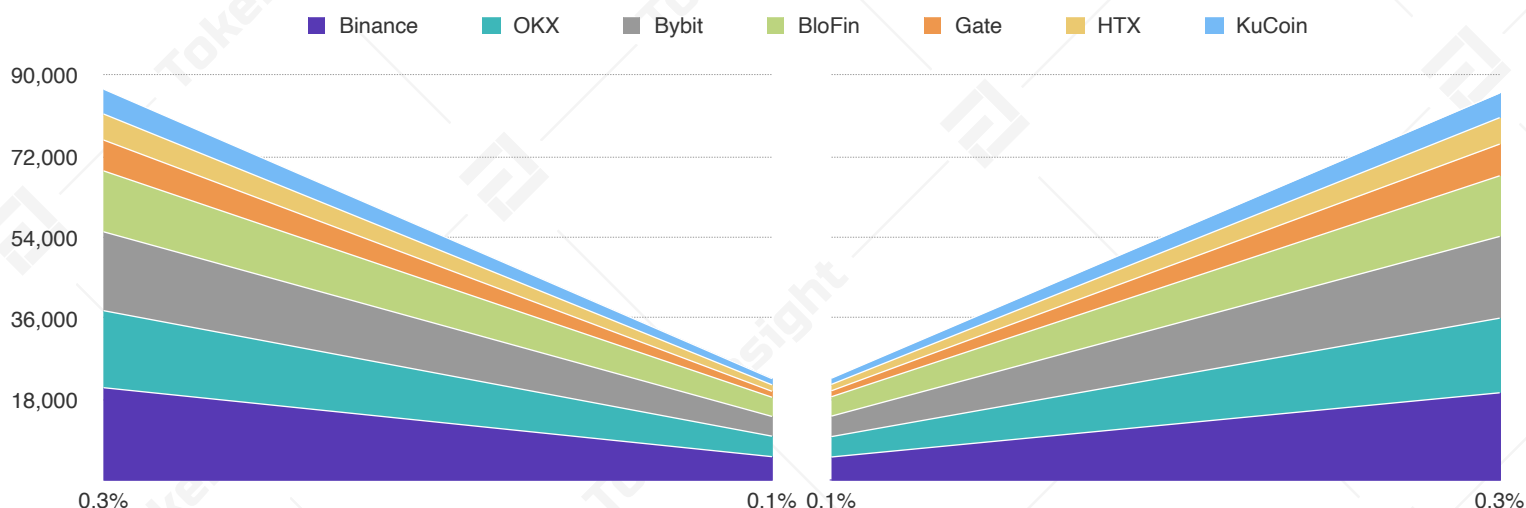
Regarding SOLUSDT, Binance maintains its leading position at both depths, although the difference is not significant, it still performs remarkably well. OKX continues its consistent performance, maintaining a greater advantage at the 0.1% depth, surpassing the third-ranked Bybit; however, it is slightly lower than Bybit at the 0.3% depth, demonstrating the relative strengths of different exchanges in depth.

Among other exchanges, BloFin's performance is also impressive, significantly better than other exchanges, showcasing strong competitiveness.

2.2.2 Derivatives Bid-Ask Spread

TokenInsight selected the BTCUSDT, ETHUSDT, and SOLUSDT trading pairs and calculated the bid-ask spread ratio for each pair. The results are shown in the table below.

▸ **Derivatives Bid-Ask Spread Ratio**
Source: TokenInsight   ■ 1st ■ 2nd

Derivatives Exchange	BTCUSDT Spread	ETHUSDT Spread	SOLUSDT Spread
OKX	0.000153%	0.000306%	0.005591%
Binance	0.000189%	0.000320%	0.000794%
Bybit	0.000170%	0.000324%	0.000967%
BloFin	0.004099%	0.000561%	0.011511%
Gate	0.000186%	0.001516%	0.005792%
HTX	0.000233%	0.000342%	0.003157%
KuCoin	0.000171%	0.000310%	0.001541%

Looking at the bid-ask spread ratio, OKX demonstrates a relatively significant advantage in the BTCUSDT and ETHUSDT trading pairs, showcasing its competitive strength in these markets. Meanwhile, Binance offers the smallest spread ratio in the SOLUSDT trading pair. It's worth noting that although KuCoin did not rank among the top two, its overall performance is stable, with spread ratios better than most exchanges.

2.2.3 Derivatives Trading Volume

TokenInsight has compiled the average 24-hour derivatives trading volume of different pairs across various exchanges. The statistical results are as follows.

From the table, it's evident that in terms of trading volume, Binance leads significantly ahead of other exchanges in the 24-hour trading volume for the three pairs. Its average 24-hour trading volume is approximately $22.4B for BTC, $9.5B for ETH, and $3.8B for SOL, taking the top spot, which is nearly three times higher than the second-ranked OKX. OKX follows closely behind, with its 24-hour BTC trading volume being the highest among exchanges other than Binance, with over 160,000 BTC traded and a volume of around $11.1B. The trading volume of other exchanges mostly ranges from $0.7B to $1.9B.

‣ **24-Hour Derivatives Trading Volume**
Source: TokenInsight

■ 1st ■ 2nd

Derivatives Exchange	BTC Trading Vol	ETH Trading Vol	SOL Trading Vol
Binance	334,635.2	2,729,500.1	20,639,193.6
OKX	165,844.7	1,973,925.7	7,968,727.5
Bybit	146,139.9	740,786.6	7,243,133.4
BloFin	27,374.3	353,835.2	4,709,428.4
Gate	17,803.9	216,585.2	531,594.6
HTX	16,407.6	173,555.7	669,703.7
KuCoin	11,554.6	115,886.5	1,134,903.5

2.2.4 Derivatives Slippage

To test the slippage that large traders and whales might face, TokenInsight simulated three different purchasing scenarios in the derivatives slippage analysis.

We simulated the situations where $1M, $5M, and $10M were used to purchase BTC, ETH, and SOL, respectively. The results are as follows:

‣ **BTCUSDT Slippage**
Source: TokenInsight

■ 1st ■ 2nd

Derivatives Exchange	$1M Slippage	$5M Slippage	$10M Slippage
OKX	0.0072%	0.0245%	0.0384%
Binance	0.0057%	0.0222%	0.0386%
Bybit	0.0089%	0.0266%	0.0422%*
BloFin	0.0159%	0.1251%	0.2816%
Gate	0.0191%	0.0716%	0.1872%*
HTX	0.0170%	0.0495%	0.0767%*
KuCoin	0.0261%	0.1116%*	-

Based on the test results, it is evident that Binance has the lowest slippage for BTC buy orders of $1M and $5M. The slippage for buy-side orders of $1M and $5M on Binance is approximately 0.0057% and 0.0222%, respectively.

Following closely behind is OKX, which, apart from Binance, exhibits the best performance in slippage for the first two segments. Moreover, the gap between OKX and Binance diminishes as the simulated trading amount increases. At $10M, OKX's slippage performance even surpasses that of Binance, making it the top performer among all exchanges, which indicates that OKX has a certain advantage in handling large transactions, where huge trades have relatively smaller impacts on BTC prices, and thus can provide a more stable trading environment.

*Due to limitations in exchange data APIs, slippage for some exchanges could not be simulated and calculated. The data presented here are estimated through multiple analyses and are for reference only. "-" indicates that the estimated results deviate significantly from the actual situation, and therefore, are not included in the comparison at this point.

‣ **ETHUSDT Slippage**
Source: TokenInsight

■ 1st ■ 2nd

Derivatives Exchange	$1M Slippage	$5M Slippage	$10M Slippage
OKX	0.0113%	0.0358%	0.0592%
Binance	0.0148%	0.0458%	0.0784%
Bybit	0.0189%	0.0473%	0.0855%*
BloFin	0.0425%	0.2282%	0.3583%
Gate	0.0263%	0.0893%	0.1804%
HTX	0.0279%	0.0777%	0.1526%*
KuCoin	0.0482%	0.1680%*	-

In terms of ETH slippage, OKX has the lowest slippage among all exchanges across the three simulated purchase volumes. Binance follows closely in the second position, with its slippage being only 0.0035% higher than OKX's at the smallest simulated purchase volume. However, as the simulated purchase amount increases, the gap between Binance's slippage and OKX's gradually widens.

‣ **SOLUSDT Slippage**
Source: TokenInsight

■ 1st ■ 2nd

Derivatives Exchange	$1M Slippage	$5M Slippage	$10M Slippage
Binance	0.0453%	0.1861%	0.3541%
OKX	0.0618%	0.2468%	0.6862%
Bybit	0.0576%	0.2031%*	-
BloFin	0.1524%	0.8736%	1.2371%
Gate	0.1348%	0.7081%	1.2850%*
HTX	0.1249%	0.7245%*	-
KuCoin	0.1257%	0.4167%*	-

Regarding SOL slippage, based on the available data, Binance maintains an absolute leading position across all three segments of SOL slippage, with its advantage gradually increasing as the simulated purchase amount increases. Its slippage for a $10M SOL purchase is 0.3541%, significantly lower than other exchanges.

Bybit ranks second in slippage for the $1M and $5M segments, but due to API limitations, the slippage estimation for a $10M purchase differs significantly from other existing exchange data and is therefore not included in the comparison for now.

2.2.5 Derivatives Trading Fee

TokenInsight compiled the Maker/Taker fee rates for regular users and highest-tier VIP users across various exchanges. The results are as follows.

▸ **Derivatives Trading Fee**
Source: TokenInsight

Derivatives Exchange	Regular Users		Highest-Tier VIP Users	
	Maker / Taker	30-day trading vol (USD)	Maker / Taker	30-day trading vol (USD)
OKX	0.020% / 0.050%	< 50,000,000	-0.005% / 0.015%	≥ 20,000,000,000
Binance	0.020% / 0.050%	< 15,000,000	0.000% / 0.017%	≥ 25,000,000,000
Bybit	0.020% / 0.055%	< 10,000,000	0.000% / 0.025%	≥ 2,000,000,000
BloFin	0.020% / 0.060%	< 10,000,000	0.000% / 0.035%	≥ 500,000,000
Gate	0.015% / 0.050%	< 60,000	0.000% / 0.020%	≥ 3,000,000,000
HTX	0.020% / 0.050%	<100,000	-0.010% / 0.025%	≥ 3,000,000,000
KuCoin	0.020% / 0.060%	<5,000,000	-0.008% / 0.025%	≥ 950,000,000

In terms of fees for regular users, Gate offers the lowest maker fee among all exchanges, at 0.015%. While the maker fee for other exchanges is 0.02%. Regarding taker fees, there is little difference among exchanges, ranging from 0.05% to 0.06%.

For highest-tier VIP users, OKX, HTX, and KuCoin offer negative maker fees. Among them, HTX has the lowest fee among the three exchanges. However, OKX performs better in terms of taker fees. Overall, OKX ranks at the top among the surveyed exchanges in both maker and taker fees for contracts, making it the most attractive option for large investors and major market makers.

2.3 Spot Analysis

2.3.1 Spot Trading Depth

In terms of trading depth, TokenInsight has compiled statistics on the average depth of the BTC/USDT, ETH/USDT, and SOL/USDT trading pairs across various exchanges at price intervals of 0.1%, 0.3%, and 0.5%. The results are as follows.

▸ **BTC/USDT Trading Depth (USDT)**

Source: TokenInsight

■ 1st ■ 2nd

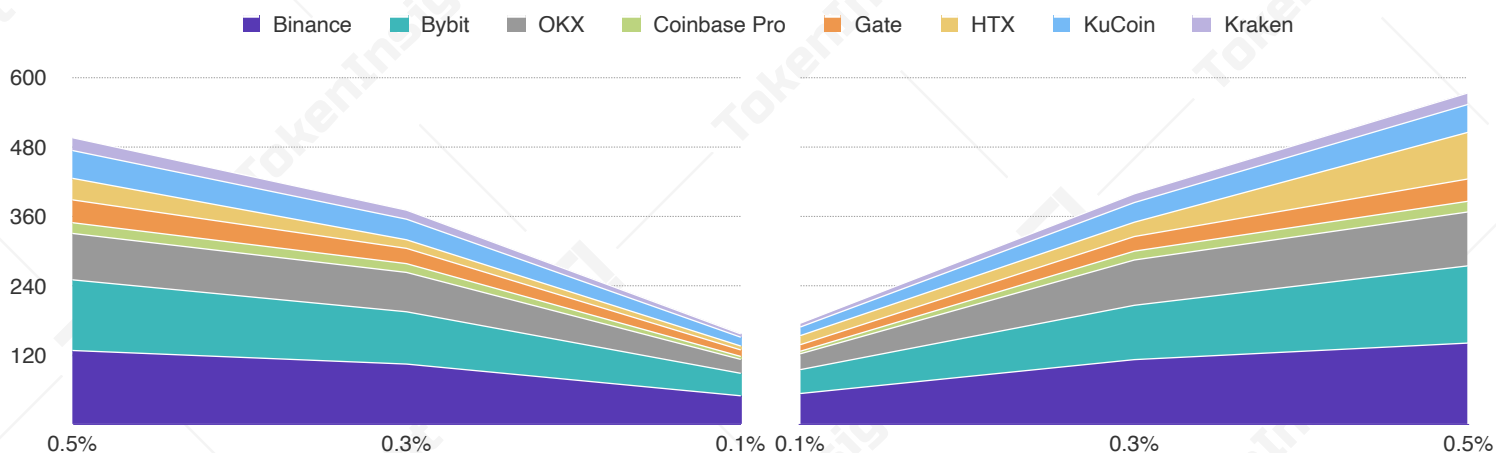| Spot Exchange	0.1% Depth		0.3% Depth		0.5% Depth	
	Bid	Ask	Bid	Ask	Bid	Ask
Binance	3,250,949.3	3,522,659.9	6,916,609.2	7,459,509.0	8,480,619.6	9,397,256.0
Bybit	2,600,983.5	2,769,654.9	6,055,858.0*	6,308,144.6*	7,923,877.4*	8,615,418.1*
OKX	1,611,215.1	1,839,412.0	4,540,672.2	5,265,106.0	5,358,952.4	6,268,277.9
Coinbase Pro	342,102.0	295,282.6	1,015,708.2	1,025,419.5	1,239,357.7	1,239,697.1
Gate	756,209.4	758,866.7	1,764,243.1	1,695,014.5	2,631,962.1	2,587,378.4
HTX	453,235.1	1,048,722.0	995,257.3	1,661,432.0	2,506,249.5	5,411,279.9
KuCoin	1,018,720.5	995,782.7	2,371,882.4*	2,267,986.9*	3,206,621.3*	3,225,574.3*
Kraken	378,684.1	439,256.1	1,048,170.9	1,019,173.7	1,480,982.7	1,329,989.4

Looking at the BTC/USDT trading depth, Binance outperforms other exchanges across all depths, showing the most outstanding performance. Following closely behind are Bybit and OKX, both of which also demonstrate decent performance in terms of depth.

Specifically, at a depth of 0.1%, Binance has a significant lead over Bybit, while at depths of 0.3% and 0.5%, the gap between the two exchanges narrows, indicating that Bybit performs better in the mid to long range depths compared to the near range. This trend may reflect Bybit's advantage in meeting the needs of large trading orders, especially for traders requiring deeper depth, Bybit can provide a relatively reliable trading environment.

Likewise, OKX shows a significant improvement at a depth of 0.3%, demonstrating its ability to provide substantial trading depth when facing large traders. This capability is crucial for meeting the demands of whales, and OKX evidently exhibits strength in this aspect.

‣ BTC/USDT Trading Depth (BTC)

Source: TokenInsight

■ Binance ■ Bybit ■ OKX ■ Coinbase Pro ■ Gate ■ HTX ■ KuCoin ■ Kraken

‣ ETH/USDT Depth (USDT)

Source: TokenInsight

■ 1st ■ 2nd

Spot Exchange	0.1% Depth		0.3% Depth		0.5% Depth	
	Bid	Ask	Bid	Ask	Bid	Ask
Binance	1,752,446.0	1,773,891.3	4,447,008.7	4,309,708.2	5,290,202.2	5,187,075.9
Bybit	1,552,459.6	1,649,152.9	3,081,087.8	2,946,298.1	4,044,450.0*	3,888,523.6*
OKX	766,989.3	749,729.5	2,754,076.7	2,847,591.2	3,296,417.1	3,335,556.5
Coinbase Pro	232,744.5	212,025.7	947,871.0	987,322.3	1,173,590.9	1,213,747.1
Gate	604,533.3	588,521.7	1,461,952.8	1,350,776.0	2,277,789.9	2,172,400.2
HTX	305,077.9	436,339.3	571,167.0	821,345.5	2,476,816.3	4,201,770.4
KuCoin	545,936.3	531,630.5	1,056,560.6	1,065,881.4	1,386,914.9*	1,406,750.1*
Kraken	228,817.5	293,712.5	507,790.7	653,721.9	701,074.0	906,363.1

Regarding the ETH/USDT, Binance continues to demonstrate excellent performance, with its buy and sell depth ranking highest in all intervals. In comparison, Bybit ranks second in both 0.1% and 0.3% depths, showing some competitiveness, but its buy depth at 0.5% lags slightly behind HTX, ranking third.

It's worth mentioning that Gate's performance on ETH is notably better than its performance on BTC. Gate's trading depth across all three intervals surpasses KuCoin, placing it in the second tier.

* Due to temporary unavailability of depth data from Bybit and KuCoin, actual data for the ETH/USDT trading pair at depth of 0.5% could not be obtained. The data provided here is estimated based on multiple analyses and is for reference only.

‣ **ETH/USDT Trading Depth (ETH)**

Source: TokenInsight

■ Binance ■ Bybit ■ OKX ■ Coinbase Pro ■ Gate ■ HTX ■ KuCoin ■ Kraken
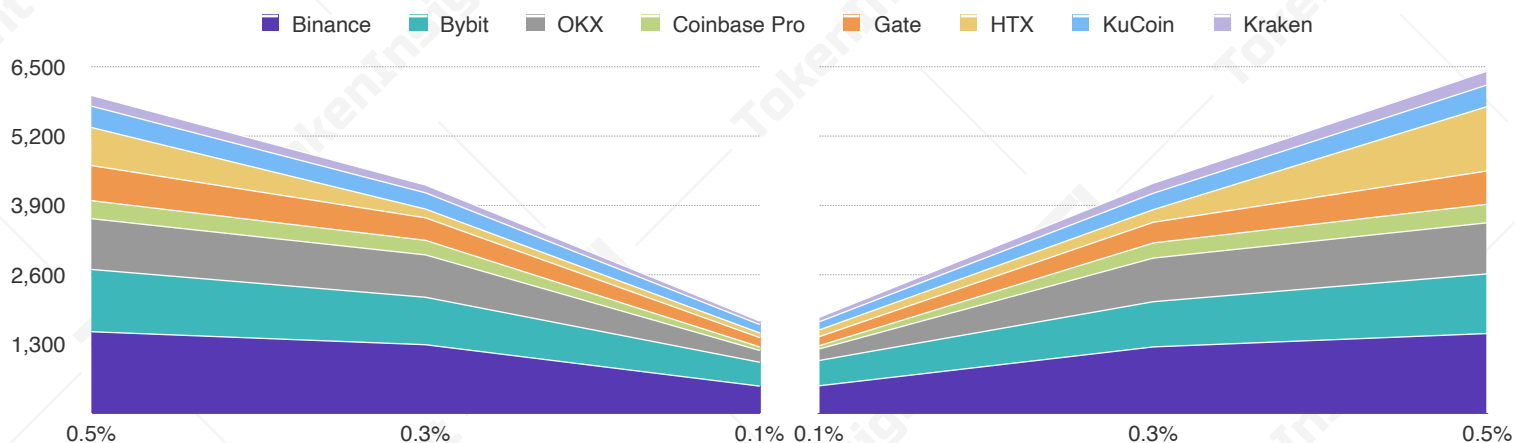
‣ **SOL/USDT Depth (USDT)**

Source: TokenInsight

■ 1st ■ 2nd

Spot Exchange	0.1% Depth		0.3% Depth		0.5% Depth	
	Bid	Ask	Bid	Ask	Bid	Ask
Binance	526,900.5	559,818.0	1,657,957.4	1,704,354.7	2,295,818.0	2,335,487.1
OKX	270,460.2	256,674.3	998,879.4	1,025,171.4	1,383,319.7	1,388,794.0
Bybit	204,065.9	212,110.0	803,178.1	782,094.1	1,241,432.3	1,165,911.9
Coinbase Pro	29,940.6	26,713.2	97,009.1	91,146.4	130,360.6	123,852.0
Gate	221,623.4	278,385.0	561,442.0	719,825.1	835,544.1	1,075,853.0
HTX	58,300.9	57,135.9	151,310.1	149,300.1	361,684.6	254,942.5
KuCoin	124,952.2	138,490.7	584,277.7	628,747.1	808,757.0*	869,258.2*
Kraken	87,256.1	80,900.6	187,362.8	181,217.0	247,205.2	241,778.4

With regard to SOL/USDT, Binance maintains its first-place position in all three trading depth intervals. OKX ranks second across all depth intervals, showing competitiveness despite trailing behind Binance. Gate's depth performance exceeds Bybit in the 0.1% interval, ranking third, indicating its advantage in shallower trading depths. However, in the 0.3% and 0.5% trading depths, Gate is surpassed by Bybit, and as the trading depth increases, the gap between the two widens.

* Due to temporary unavailability of depth data from KuCoin, actual data for the SOL/ USDT trading pair at depth of 0.5% could not be obtained. The data provided here is estimated based on multiple analyses and is for reference only.

‣ SOL/USDT Trading Depth (SOL)
Source: TokenInsight
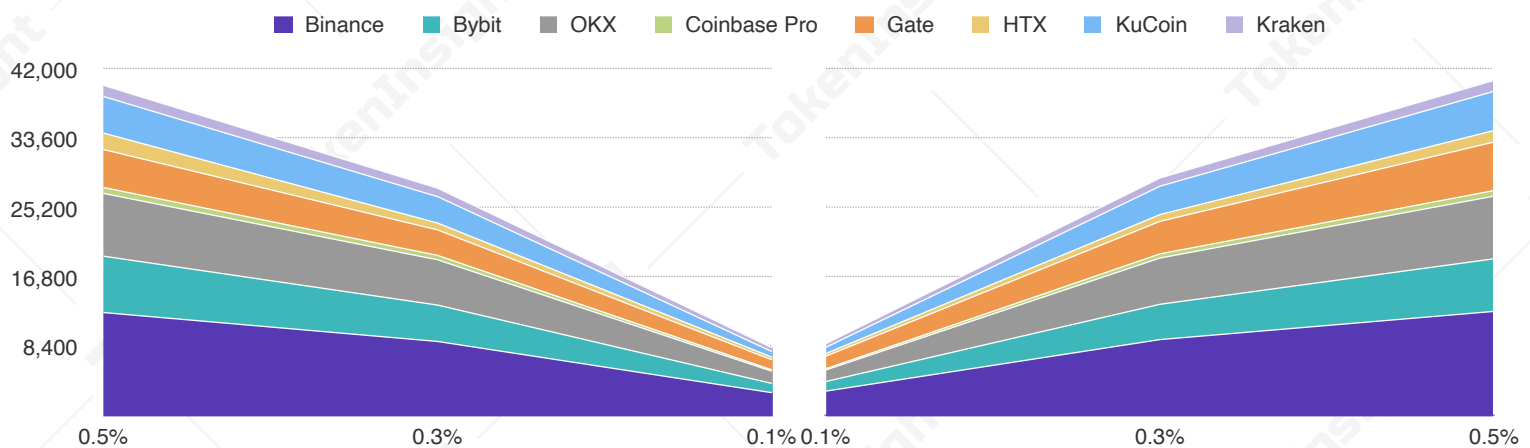
2.3.2 Spot Bid-Ask Spread

TokenInsight selected the BTC/USDT, ETH/USDT, and SOL/USDT trading pairs and calculated the bid-ask spread ratio for each pair. The results are shown in the table below.

‣ Spot Bid-Ask Spread Ratio
Source: TokenInsight

1st 2nd

Spot Exchange	BTC/USDT Spread	ETH/USDT Spread	SOL/USDT Spread
Binance	0.000151%	0.000394%	0.005579%
OKX	0.000256%	0.000379%	0.005880%
Bybit	0.000348%	0.001031%	0.009689%
Coinbase Pro	0.022599%	0.027046%	0.056358%
Gate	0.000390%	0.000733%	0.009588%
HTX	0.000098%	0.000833%	0.022117%
KuCoin	0.000161%	0.000709%	0.005096%
Kraken	0.004477%	0.013612%	0.027047%

From the perspective of the Bid-Ask spread ratio, the exchanges with the smallest spread ratio vary across different trading pairs. However, it's worth noting that Binance consistently ranks second in terms of the smallest spread ratio among these trading pairs, which indicates that while there are slight differences in performance among different exchanges, Binance excels in maintaining low spreads. Lower spreads imply more intense market trading competition and higher market efficiency. Therefore, Binance demonstrates excellent trading efficiency across various trading pairs.

Specifically, for the BTC/USDT trading pair, HTX ranks first, with its spread ratio performance significantly better than other exchanges. Regarding ETH/USDT, OKX has the smallest ratio, although it's better than other exchanges, the gap compared to Binance is not significant. A similar situation occurs in the SOL/USDT trading pair, where KuCoin ranks first, but its spread ratio is only about 0.0005% lower than Binance, almost negligible.

2.3.3 Spot Trading Volume

TokenInsight has compiled the average 24-hour spot trading volume of different pairs across various exchanges. The statistical results are as follows.

▸ **24-Hour Spot Trading Volume**
Source: TokenInsight

■ 1st ■ 2nd

Spot Exchange	BTC Trading Vol	ETH Trading Vol	SOL Trading Vol
Binance	43,447.2	462,413.0	5,168,433.1
OKX	14,433.0	161,220.2	1,477,646.3
Bybit	15,321.4	116,810.6	949,957.9
Coinbase Pro	676.1	9,517.8	20,002.5
Gate	2,422.7	31,732.3	390,783.8
HTX	757.8	3,934.6	39,401.8
KuCoin	6,678.7	75,070.3	517,057.7
Kraken	336.2	2,203.5	22,695.5

As the exchange with the largest market share in spot trading, Binance has the highest 24-hour trading volume for BTC, ETH, and SOL among all exchanges. Its average 24-hour trading volume for BTC is around $2.9 billion, approximately three times that of Bybit. The 24-hour trading volumes for ETH and SOL are approximately $1.6 billion and $942M, respectively.

The exchange ranked second in spot trading volume is OKX, with 24-hour trading volumes for ETH and SOL of around $559M and $269M, respectively, outperforming other exchanges except Binance.

2.3.4 Spot Slippage

To test the slippage that large traders and whales might face, TokenInsight simulated three different purchasing scenarios in the spot slippage analysis.

We simulated the situations where $1M, $3M, and $5M were used to purchase BTC, ETH, and SOL, respectively. The results are as follows:

▸ BTC/USDT Slippage
Source: TokenInsight

■ 1st ■ 2nd

Spot Exchange	$1M Slippage	$3M Slippage	$5M Slippage
Binance	0.0114%	0.0337%	0.0561%
Bybit	0.0397%	0.0625%	0.0853%*
OKX	0.0341%	0.0765%	0.1248%
Coinbase Pro	0.1492%	2.6520%	9.2676%
Gate	0.0455%	0.1680%	0.3386%
HTX	0.0614%	0.1993%	0.4406%*
KuCoin	0.0648%	0.2412%*	-
Kraken	0.1052%	0.5864%*	-

In the slippage test for BTC, Binance consistently maintains the lowest slippage at each simulated purchase volume, indicating that it is better suited for both large traders and whales, providing them with a more stable trading environment. In comparison, OKX performs well in the slippage at the $1M level, ranking second, but is surpassed by Bybit in the tests at $3M and $5M, which suggests that Bybit has a competitive edge in catering to whale users, demonstrating better performance in stress tests.

*Due to limitations in exchange data APIs, slippage for some exchanges could not be simulated and calculated. The data presented here are estimated through multiple analyses and are for reference only. "-" indicates that the estimated results deviate significantly from the actual situation, and therefore, are not included in the comparison at this point.

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‣ **ETH/USDT Slippage**
Source: TokenInsight

1st   2nd

Spot Exchange	$1M Slippage	$3M Slippage	$5M Slippage
Binance	0.0254%	0.0690%	0.1185%
Bybit	0.0527%	0.0917%	0.1307%*
OKX	0.0630%	0.1483%	0.3826%
Coinbase Pro	0.2028%	8.2899%	23.2537%
Gate	0.0609%	0.2271%	0.4094%
HTX	0.1783%	0.3499%	0.4277%
KuCoin	0.1183%	0.6797%*	-
Kraken	0.2196%	0.7564%*	-

In the ETH slippage test, Binance and Bybit continue to perform excellently, ranking first and second, respectively. They both maintain low slippage in each volume test. OKX and Gate also demonstrate outstanding performance in slippage with a $1M purchase, but as the purchase volume increases, the gap between their slippage and that of Binance and Bybit gradually widens.

‣ **SOL/USDT Slippage**
Source: TokenInsight

1st   2nd

Spot Exchange	$1M Slippage	$3M Slippage	$5M Slippage
Binance	0.0775%	0.2713%	0.5258%
Bybit	0.2130%	0.7939%*	-
OKX	0.1584%	0.8427%	1.9637%
Coinbase Pro	15.6771%	23.4366%	71.7759%*
Gate	0.1227%	0.4917%	3.4436%
HTX	2.0040%*	-	-
KuCoin	0.1849%*	-	-
Kraken	0.8137%*	-	-

Due to limitations in accessing data from several exchanges, we were unable to obtain complete segmented slippage information for SOL. From the available data, Binance continues to maintain an absolute leading position in the test, and its advantage is more pronounced compared to BTC and ETH.

It is noteworthy that Gate performed exceptionally well in this round of testing, ranking second in both the $1M and $3M tests, demonstrating its strong competitiveness.

2.3.5 Spot Trading Fee

TokenInsight compiled the Maker/Taker fee rates for regular users and highest-tier VIP users across various exchanges. The results are as follows.

▸ **Spot Trading Fee**
Source: TokenInsight

Spot Exchange	Regular Users		Highest-Tier VIP Users	
	Maker / Taker	30-day trading vol (USD)	Maker / Taker	30-day trading vol (USD)
OKX	0.080% / 0.100%	< 5,000,000	-0.005% / 0.015%	≥ 5,000,000,000
Binance	0.100% / 0.100%	< 1,000,000	0.012% / 0.024%	≥ 4,000,000,000
Bybit	0.150% / 0.200%	<1,000,000	0.005% / 0.015%	≥ 100,000,000
Coinbase Pro	0.400% / 0.600%	< 10,000	0.000% / 0.050%	≥ 400,000,000
Gate	0.100% / 0.100%	< 60,000	0.000% / 0.020%	≥ 3,000,000,000
HTX	0.200% / 0.200%	< 10,000	0.0126% / 0.0218%	≥ 1,800,000,000
KuCoin	0.100% / 0.100%	< 3,000,000	-0.005% / 0.025%	≥ 950,000,000
Kraken	0.250% / 0.400%	< 10,000	0.000% / 0.100%	≥ 10,000,000

From the perspective of regular user fees, OKX offers the lowest Maker and Taker fees among all exchanges. Its Maker fee is below 0.1%, making it the most cost-effective option for retail traders and more enticing for attracting new users to trade.

Regarding the fee rates for highest-tier VIP users, OKX and KuCoin offer the lowest Maker fees, both of which are negative, which is particularly attractive for users who frequently engage in large-volume trades. The entry threshold for OKX's highest-tier VIP users is relatively high, requiring over $5 billion, while KuCoin's is comparatively lower at $950M. However, OKX outperforms KuCoin significantly in terms of Taker fees.

03.Ranking

▸ **Derivatives Liquidity Ranking**

Source: TokenInsight

	Derivatives
Tier 0	OKX, Binance
Tier 1	Bybit, BloFin
Tier 2	Gate, HTX
Tier 3	KuCoin

▸ **Spot Liquidity Ranking**

Source: TokenInsight

	Spot
Tier 0	Binance
Tier 1	Bybit, OKX
Tier 2	Gate, KuCoin, HTX
Tier 3	Kraken, Coinbase Pro

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