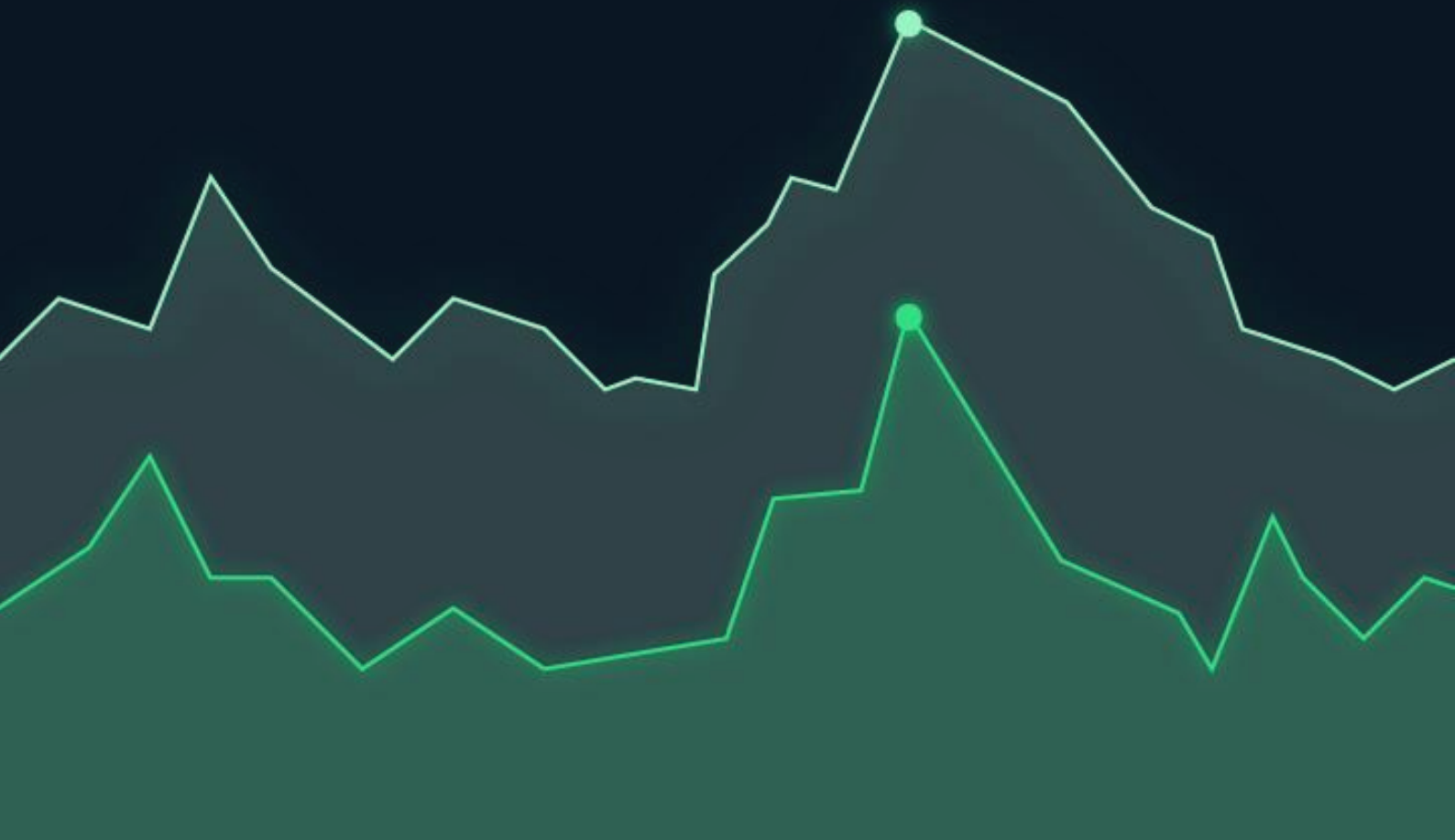




# EXCHANGE REVIEW

## NOVEMBER 2019



## Abstract

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CryptoCompare's Exchange Review aims to capture the key developments within the cryptocurrency exchange market. Our review focuses on analyses that relate to exchange volumes, which include those related to crypto derivatives trading, market segmentation by exchange fee models, and crypto to crypto vs fiat to crypto volumes.

We also conduct an analysis of bitcoin trading into various fiats and stablecoins, an additional overview of top crypto exchange rankings by spot trading volume, as well as a focus on how volumes have developed historically for the top trans-fee mining and decentralized exchanges.

CryptoCompare's Exchange Review is conducted on a monthly basis and caters to both the crypto-enthusiast interested in a broad overview of the crypto exchange market, as well as investors, analysts and regulators interested in more specific analyses.

For questions related to our research or any potential requests, feel free to contact our research department at [research@cryptocompare.com](mailto:research@cryptocompare.com).

**View the interactive Exchange Review Dashboard:**

Exchange Review **Dashboard**

For those interested in accessing CryptoCompare's data for their own purposes, including cryptocurrency trade data, order book data, blockchain data, social data or historical data across thousands of cryptocurrencies and 200+ exchanges, please take a look at CryptoCompare's API here: <https://min-api.cryptocompare.com>

## **Contents**

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<b>Abstract</b>	<b>1</b>
<b>Executive Summary</b>	<b>3</b>
<b>November Exchange News</b>	<b>5</b>
<b>Exchange Benchmarking Analysis</b>	<b>7</b>
<b>Trade Data Analysis – Top Exchanges</b>	<b>10</b>
<b>Macro Analysis and Market Segmentation</b>	<b>14</b>
<b>November Overview – Derivatives Products</b>	<b>18</b>

# Executive Summary

## Macro Analysis and Market Segmentation

- Exchange Benchmarking Analysis** – Based on [CryptoCompare's Exchange Benchmark](#) grading methodology, on aggregate, volume from Top-tier exchanges (AA-B) decreased 8.82% while volume from Low-tier exchanges (C-F) decreased 2.93%. Aggregate Top-tier exchange volume still only represents 31.4% of the total market.
- Trade Data Analysis** - Low-tier exchanges Bitforex, EXX and LBank had the largest trade sizes relative to other top exchanges at an average of 1.62, 1.50 and 1.35 BTC respectively. Top-tier exchanges Liquid and Binance saw the highest average trade count per day in November at 402k and 362k trades per day respectively.
- Predominant Fee Type** - Exchanges that charge taker fees represented 70% of total exchange volume in November, while those that implement trans-fee mining (TFM) represented 28%. Fee-charging exchanges traded a total of 389.77 billion USD in November (down 0.1% since October), while those that implement TFM traded 156.78 billion USD (down 14.1% since October). The remaining volume represented trading by exchanges that charge predominantly no trading fees, at 5.2 billion USD.
- Derivatives (Institutional Products)** - Regulated bitcoin derivatives product volumes are still dominated by CME, whose total trading volumes are up 35.2% since October at 4.22 billion USD. CME's bitcoin futures product volumes increased from a total of 3.12 billion USD traded in October to a total of 4.22 billion USD traded in November. Meanwhile, Grayscale's bitcoin trust product (GBTC), decreased in terms of total trading volume with 490.71 million USD traded in November (down 17.5% since October).
- Derivatives Trading (Crypto Exchanges)** – OKEx was the top derivatives exchange in November, trading a total of 91.5 billion USD (down 0.4% since October). This was followed by Huobi with trading at 89.52 billion USD (up 10.4% since October). During the month of November, OKEx represented the majority of daily derivatives volumes trading at \$3.05 Bn per day (28% market share) followed by Huobi (\$2.98 Bn, 27%), BitMEX (\$2.49 Bn, 23%) and bitFlyer (\$760 Mn, 10%). Smaller exchanges Deribit and FTX represented 2% of the market each.

### Top Products

In November, the most traded products by total monthly volume were Huobi's Quarterly BTC Future (Huobi\_BTC191227 at \$46.1 Bn) and BitMEX's BTC perpetual future (\$37.9 Bn), followed by Binance's BTC perpetual future at \$32.3 Bn. On average, these three products traded \$1.5Bn, \$1.3Bn and \$1.1Bn per day in November.

### BTC Perpetuals

In November, the most traded perpetual Bitcoin futures products by total monthly volume were BitMEX's BTC perpetual (\$37.9Bn), followed by Binance's and BitFlyer's BTC perpetual futures products (\$32.3Bn and \$22.8Bn respectively).

### ETH Perpetuals

On average, in November BitMEX, OKEx and Deribit traded \$147Mn, \$84.6Mn and \$25Mn in daily volume respectively. These three exchanges generate most of the trading volume for ETH perpetual futures and represent 48%, 28% and 8% market share respectively. BitMEX's product volume decreased 24% (to \$4.4Bn) in November but still represents most of the ETH perpetuals market.

- Fiat Capabilities** - Trading volume from exchanges that offer only crypto pairs represented 82.0% (452.63 billion USD) of total trading volume in November, while fiat to crypto exchanges represented 18.0% (99.12 billion USD). This is similar in proportion to the previous two months. Volume from crypto to crypto exchanges decreased 6.7% (to 453 billion USD) in November, while volume from exchanges that offer fiat pairs decreased 5.7% (to 99 billion USD).
- Bitcoin to Fiat Volumes** - In November, 71.0% of all Bitcoin trading into fiat was made up of the US Dollar. BTC to USD volumes decreased to 922 thousand BTC in November (down 20.0%). Meanwhile, BTC trading into JPY represented 800,000 BTC in November (down 16.0% since October), while BTC trading into EUR represented 230,000 BTC (down 13.0% since October). In November, JPY, EUR, KRW and PLN made up 95.27% of total trading from Bitcoin into fiat.

- 8 **Bitcoin to Stablecoin Volumes** – In November, BTC trading into USDT represented 79.65% of total volume (traded into fiat or stablecoin). BTC trading into USDT totalled 9.69 million BTC (up 14.48% since October). It continues to be the most popular stablecoin for trading with Bitcoin, followed by USDC, PAX and TUSD and represents 97.52% of the total Bitcoin trading into these four coins.

## Exchange Volumes

- 1. Top Crypto to Crypto Exchange Volumes** – Bitforex (C-rated) was the top crypto to crypto exchange by total volume in November at 33.82 billion USD (down 1.91% since October). This was followed by CoinBene (D-rated) and LBank (C-rated) at 30.87 billion USD (down 6.34%) and 28.36 billion USD (down 2.23%) respectively.
- 2. Top Fiat to Crypto Exchange Volumes** - P2PB2B (C-Rated) was the top fiat exchange by total volume in November at 30.98 billion USD (up 23.78% since October). This was followed by Coinsbit (C-rated) and Bithumb (C-rated) at 16.37 billion USD (up 102.1%) and 7.42 billion USD (up 15.24%) respectively.
- 3. Trans-Fee Mining Exchanges** – Bitforex (C-rated) was the top TFM exchange by total volume in November at 33.82 billion USD (down 1.91%), followed by CoinBene (D-rated) at 30.87 billion USD (down 6.34%) and CoinEx (B-rated) at 27.51 billion USD (down 0.11%).
- 4. Decentralized Exchanges** - DDEX was the largest DEX in November trading a total of 13.9 million USD (down 40.63%), followed by IDEX and BitSquare trading 7.11 million USD (down 19.97%) and 3.3 million USD (down 19.81%) respectively. DEXs represent only a small fraction of global spot exchange volume (0.01%), trading a monthly total of 27.31 million USD in November.

## November Exchange News

COMPANY	STORY	DATE
DX.Exchange	<a href="#">Nasdaq-powered crypto platform DX.Exchange shuts down</a>	Nov 4 2019
Bitfinex	<a href="#">Support for bech32 addresses now available on Bitfinex!</a>	Nov 4 2019
Coinbase	<a href="#">Introducing Staking Rewards on Coinbase</a>	Nov 6 2019
Bakkt	<a href="#">Raising the Bar: Announcing Bakkt Institutional Custody</a>	Nov 11 2019
Bithumb	<a href="#">Highly anticipated 'Bithumb Coin' officially announced by Bithumb Global</a>	Nov 12 2019
CME	<a href="#">CME Group Announces Jan. 13, 2020 Launch for Bitcoin Options</a>	Nov 12 2019
Gemini	<a href="#">Gemini Expands into Non-Fungible Tokens (NFTs) with Nifty Gateway</a>	Nov 19 2019
Binance	<a href="#">Binance Acquires India's Leading Digital Asset Platform WazirX to Launch Multiple Fiat-to-Crypto Gateways</a>	Nov 21 2019
Upbit	<a href="#">South Korean Crypto Exchange Upbit Confirms Theft of 342,000 ETH</a>	Nov 27 2019

## November Exchange News

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November provided further evidence of the increasing maturity of crypto exchanges, with several notable developments in the scope, scale and sophistication of services made available to investors. Let's look at some of the key themes from the month.

### International expansion

Crypto has global appeal, yet activity is limited by local regulations and banking laws. **Binance**, which itself identifies as 'decentralized' in its operations, has made encouraging progress in opening crypto trading to underserved markets. Over the month, the exchange announced the launch of fiat-to-crypto gateways in Turkey and India – both fast-growing markets – through local partnerships and acquisitions. The company also announced a cooperation agreement with the Ukrainian government with the goal of establishing the legal status of virtual assets in the country.

### Staking

The launch of several major Proof of Stake-based networks has fuelled investor interest in staking opportunities. With 2020 set to be a massive year for staking, **Coinbase** has acted to make the process simpler for users. The digital currency wallet provider announced the opening of staking rewards on Tezos (XTZ) for US customers, potentially opening the door for further opportunities as other networks grow in popularity.

### Exchange coins

In what's been a treacherous environment for altcoins in general, exchange coins have stood out as the better performing assets, with Binance's BNB and Huobi's HT just some examples. Popular Korean exchange **Bithumb** has joined the trend by launching its own BT token with profit sharing to incentivise holding.

### Institutional trading

The crypto space has continued to expand its offerings for institutional investors. Most notably, the **CME Group**, which launched Bitcoin Futures at the height of the 2017 bull market, announced that it would be adding options trading in January 2020.

Institutions may also take interest in the news that **Bakkt**, which launched its Bitcoin trading platform in September, will be offering “enterprise-grade” custody solutions as part of its service. The Bakkt Warehouse is already custodying funds for major holders including Pantera Capital and Galaxy Digital.

In view of increasing the robustness of crypto pricing, **Gemini** announced that its trading data would become a constituent part of the BitMex indices used to price the derivative platform’s popular perpetual futures products.

Further, **Kraken**, one of the few remaining major venues on US soil, announced the launch of its Futures Trading App to support its existing web-based product.

### Digital collectibles

Two years after CryptoKitties famously clogged the Ethereum network, non-fungible tokens (more commonly known as digital collectibles) have returned to the forefront with the popularity of applications such as God’s Unchained. **Gemini** is supporting the trend with its purchase of the Nifty Gateway, which provides an easy way to purchase collectible goods.

### Segwit implementation

Segregated Witness (or Segwit) was implemented on the Bitcoin network in July 2017, yet several major exchanges have lagged in integrating it with their platforms. **Bitfinex** announced it would be pushing segwit adoption by introducing Bech32, SegWit’s native address format, so as to prevent the possibility of users losing funds due to cross-chain mix-ups.

### Exchange closures

With the crypto winter yet to thaw, yet another exchange has failed to survive the chill. Margin trading platform **DXExchange** announced it would be closing its services due to lack of ‘economic feasibility’. The Estonian-licensed platform is seeking a buyer or merger to continue operation.

### Exchange Thefts

The month for exchanges ended on a sour note as South Korean Exchange Upbit confirmed on November that that 342,000 ETH - worth approximately \$49 million - was stolen from its hot wallet. Stating that it would cover the loss from its own funds, the theft represents another high-profile loss of funds to afflict the industry.

## Exchange Benchmarking Analysis

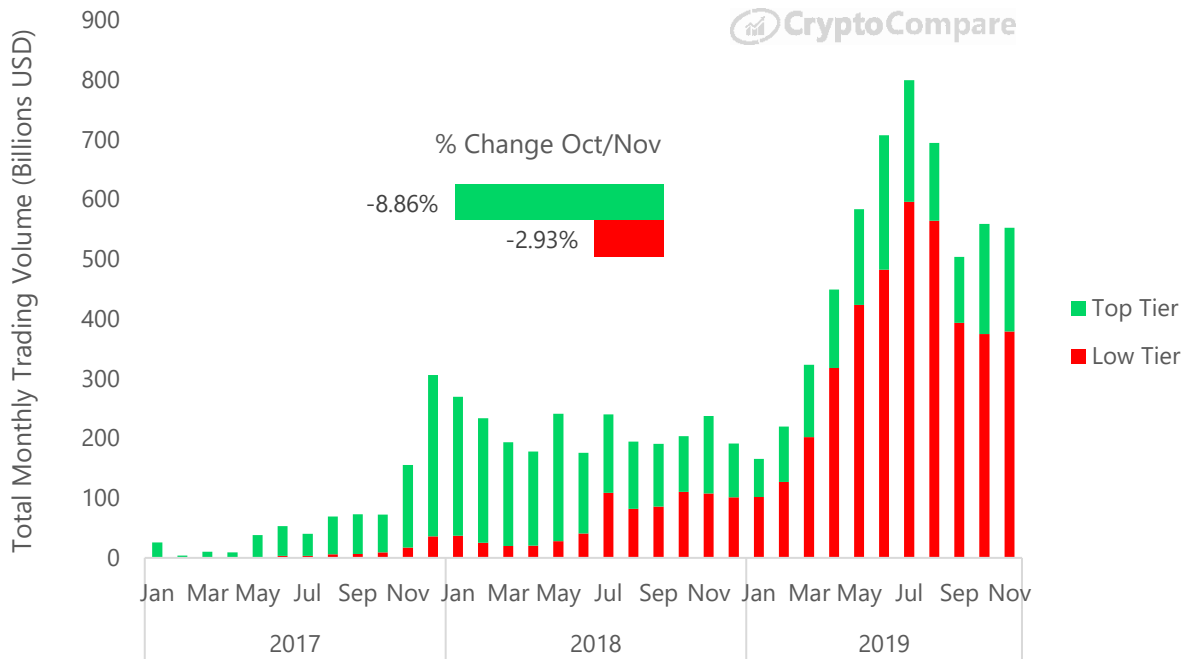
CryptoCompare's Exchange Benchmark aims to serve investors, regulators and crypto enthusiasts by scoring exchanges in terms of transparency, operational quality, regulatory standing, data provision, management team, and their ability to monitor trades and illicit activity effectively. Rather than drawing attention specifically to bad actors, we instead highlight those that behave in a manner that is conducive to maintaining an efficient and fair market, ensuring greater safety of investors. We have hence introduced the notion of "Top-tier" vs "Lower-tier" volumes.

Explore the Exchange Benchmark [here](#)



# 1 Aggregate Monthly Exchange Volumes

Figure 1 Aggregate Monthly Volume by Tier

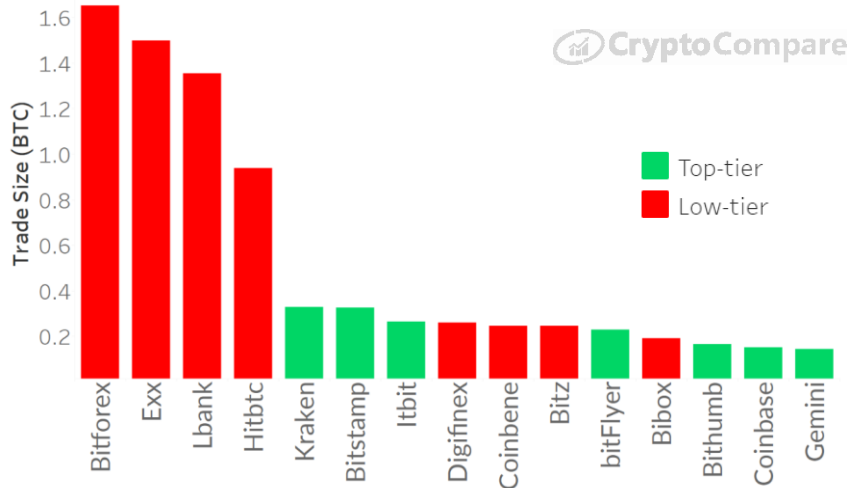


**On aggregate, volume from Top-tier exchanges (AA-B) decreased 8.86% while volume from Low-tier exchanges (C-F) decreased 2.93%.**

Aggregate Top-tier exchange volume still only represents 31.4% of the total market.

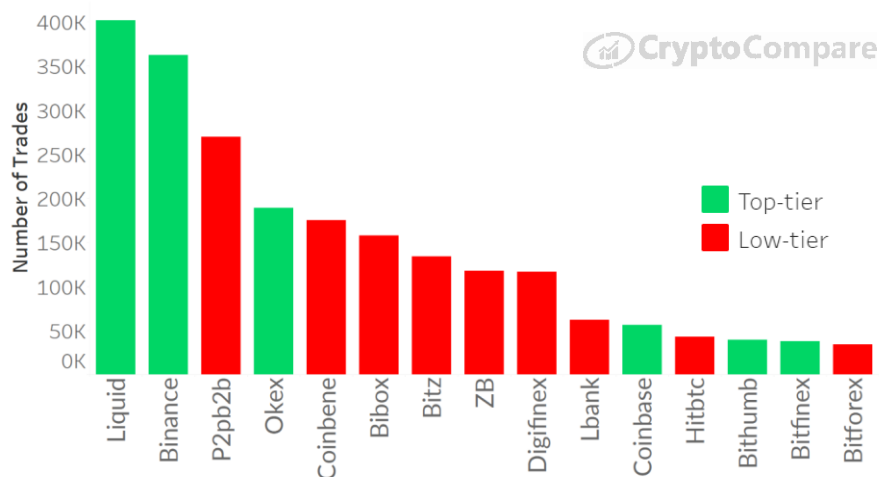
## 2 Trade Data Analysis by Tier Level

Figure 2 - Average Daily Trade Size (BTC) in November vs Tier Level – BTC Markets<sup>1</sup>



Low-tier exchanges Bitforex, EXX and LBank had the largest trade sizes relative to other top exchanges at an average of 1.62, 1.50 and 1.35 BTC respectively.

Figure 3 - Average Daily Trade Count in November vs Tier Level - BTC Markets<sup>2</sup>



Top-tier exchanges Liquid and Binance saw the highest average trade count per day in November at 402k and 362k trades per day respectively.

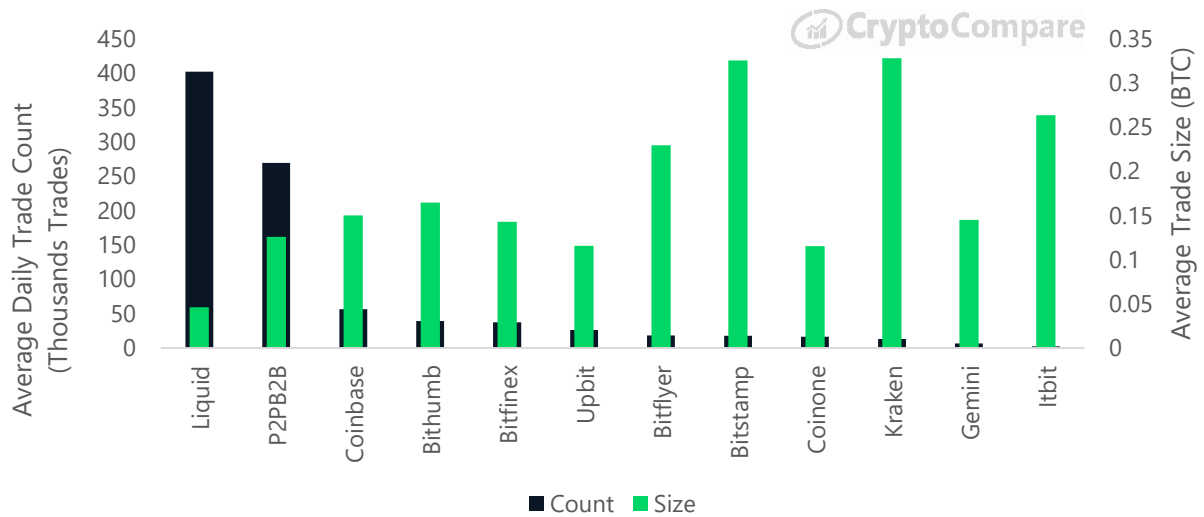
<sup>1</sup> Average daily trade size was calculated based on the daily average trade size for market, and then averaged over the course of a month of November. Markets vary for each exchange and include: BTC/USD, BTC/USDT, BTC/KRW, and BTC/JPY

<sup>2</sup> Average daily trade count was calculated based on the trade count per day, average over the month. Same markets as above.

# Trade Data Analysis – Top Exchanges

## 1 Trade Count and Size

Figure 4 - Trade Count and Size - Top Crypto to Fiat Exchanges by Volume in November

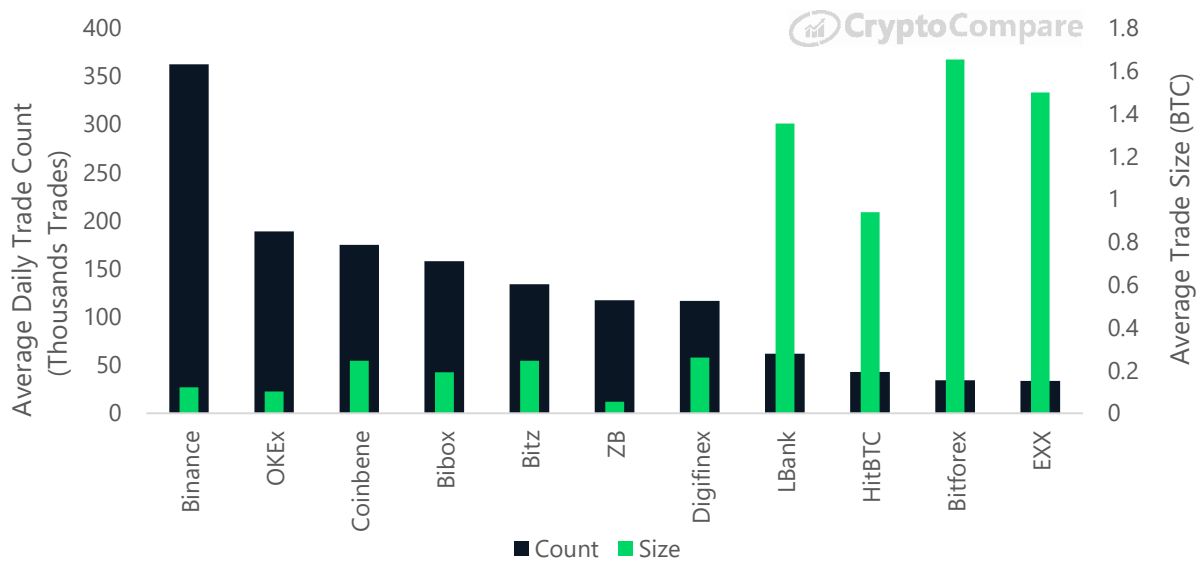


\*Note, the above chart analyses data from bitcoin trading into the most relevant fiat currency for each exchange. For example, Liquid's numbers refer to its BTC-JPY market while those of Coinbase refer to its BTC-USD market etc.

**Among the top fiat exchanges, Liquid had the largest average daily trade count (402k trades) combined with a low average trade size (0.046 BTC).**

Exchanges itBit, Gemini and Kraken traded a significantly lower number of trades per day (2.6k, 6.7k and 13.3k respectively) combined with higher trade sizes (0.26, 0.14, 0.32 BTC respectively).

Figure 5 - Trade Count and Size - Top Crypto to Crypto Exchanges by Volume in November



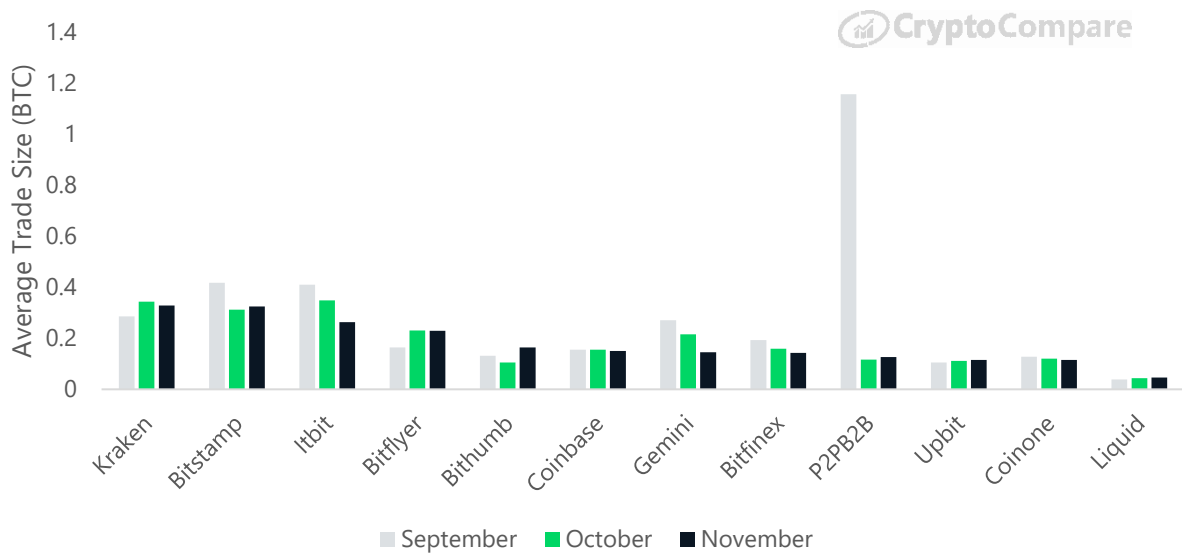
\*Note, the above chart analyses data from bitcoin trading into USDT for each exchange.

**Among the top crypto exchanges, Binance had the largest average daily trade count (362k trades) combined with a low average trade size (0.12 BTC).**

This was followed by OKEx (189k trades and 0.10BTC) and CoinBene (175k trades and 0.25BTC). LBank continued to show significantly larger trade sizes relative to the same group at 1.35 BTC, and 62,000 trades per day on average. Other trans-fee mining exchanges such as EXX, BitForex also showed relatively high average trade sizes at 1.5 BTC and 1.7 BTC per trade.

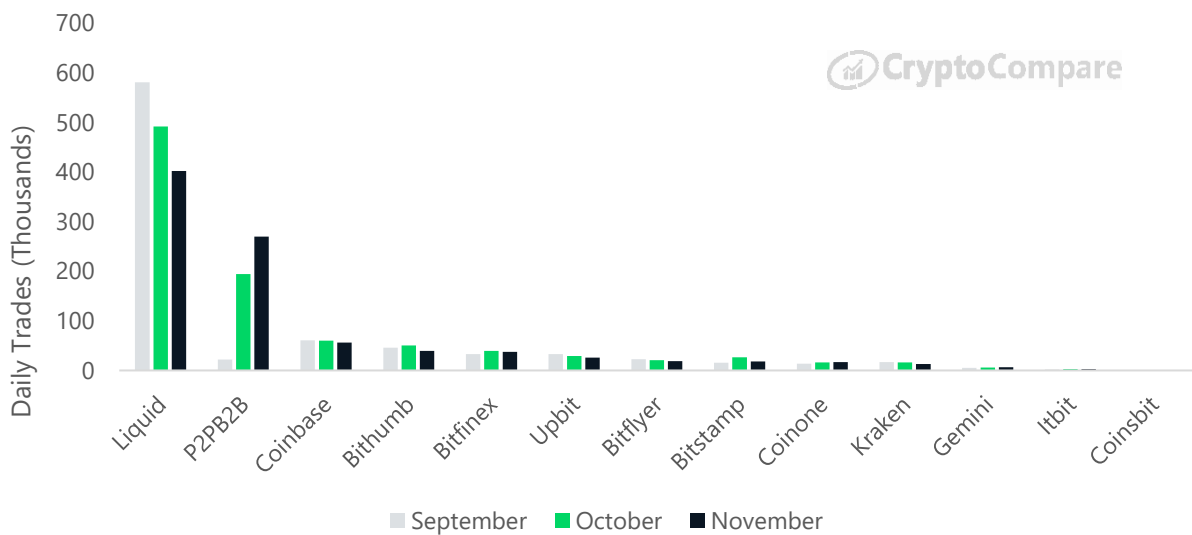
## 2 Historical Trade Count and Size

Figure 6 – Historical Average Trade Size (BTC) – Crypto to Fiat Exchanges



**Kraken, Bitstamp and ItBit had highest average trade sizes over the last month among the top fiat exchanges by volume. Meanwhile, Asian exchanges Upbit, Coinone and Liquid have consistently maintained the lowest trade sizes.**

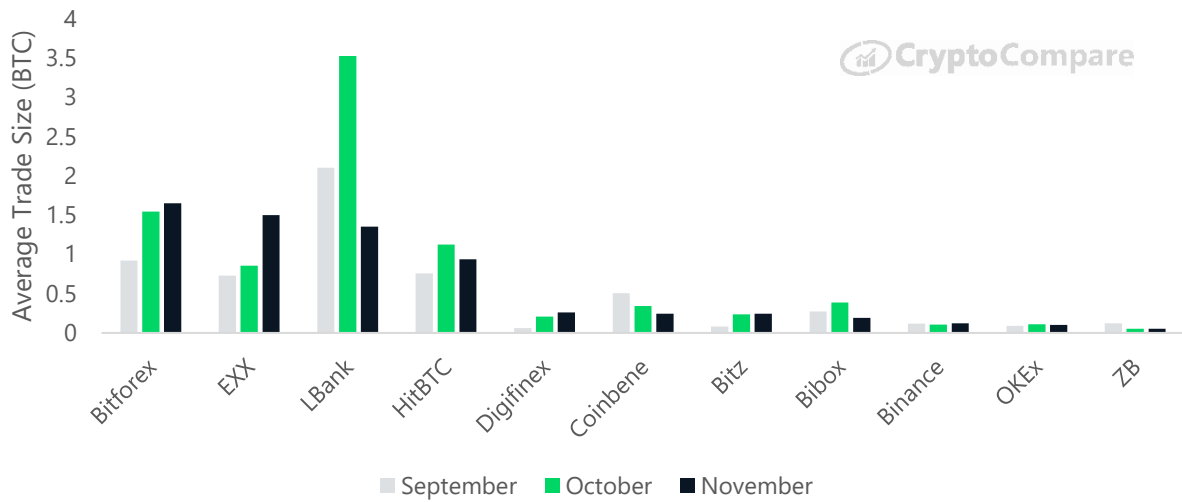
Figure 7 – Historical Daily Average Trade Count – Crypto to Fiat Exchanges



**Liquid has consistently maintained the top spot in terms of trade count over the last three months for its BTC-JPY market, with the amount of trades since October decreasing 18%.**

Liquid has seen an average of *1.5 times* more trades than next largest exchange in terms of trade count (P2PB2B) over the last month.

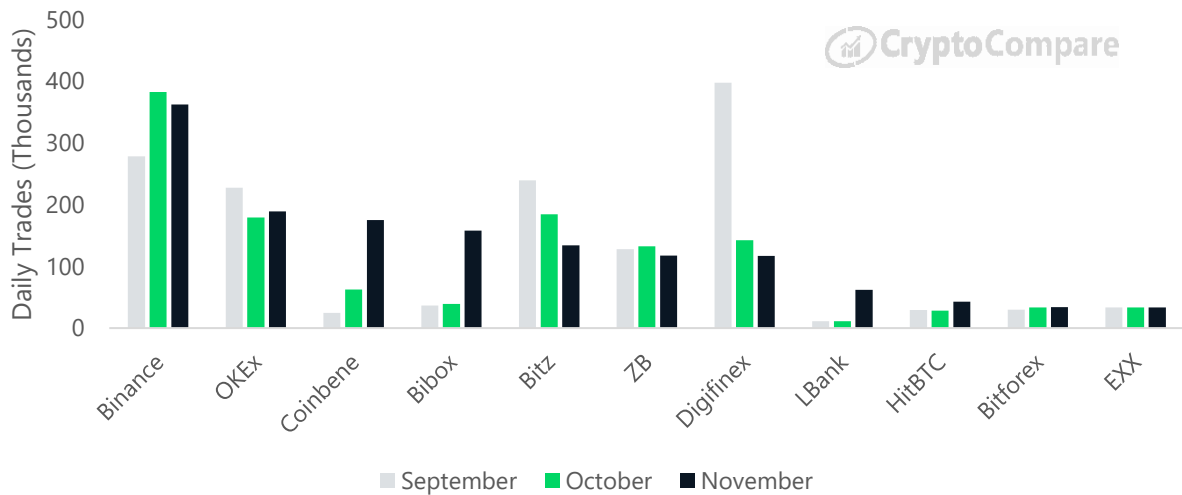
Figure 8 - Historical Average Trade Size (BTC) – Crypto to Crypto Exchanges



\*Data in above chart represents BTC-USDT markets

**Exchanges Bitforex, EXX and LBank have maintained the highest average trade sizes over the last three months among the largest crypto exchanges by volume. Meanwhile, exchanges Binance, OKEx and ZB have consistently maintained low trade sizes.**

Figure 9 - Historical Daily Average Trade Count – Crypto to Crypto Exchanges



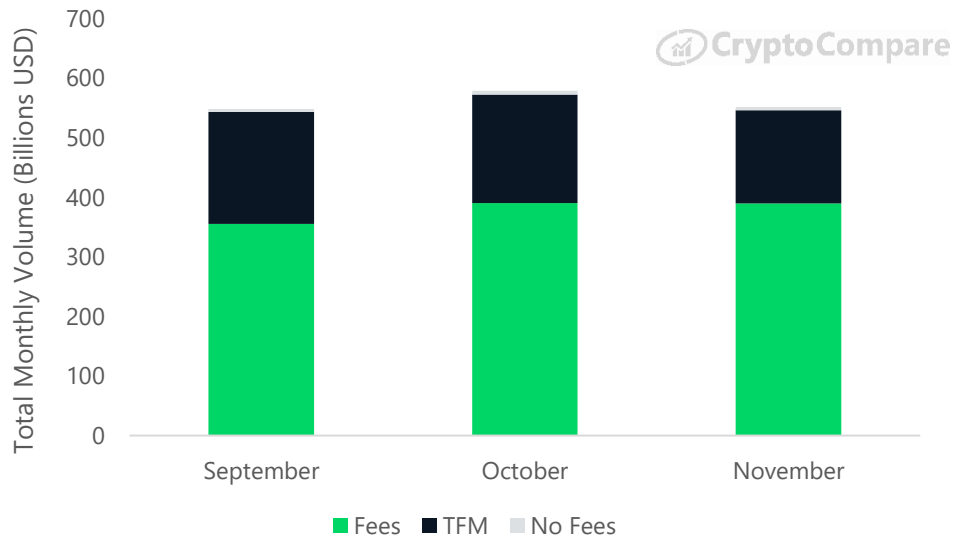
\*Data in above chart represents BTC-USDT markets

**Binance and OKEx showed the highest trade count consistently over the last three months.**

# Macro Analysis and Market Segmentation

## 1 Segmentation by Fee-Type

Figure 10 - Total Monthly Trading Volume by Predominant Fee Type

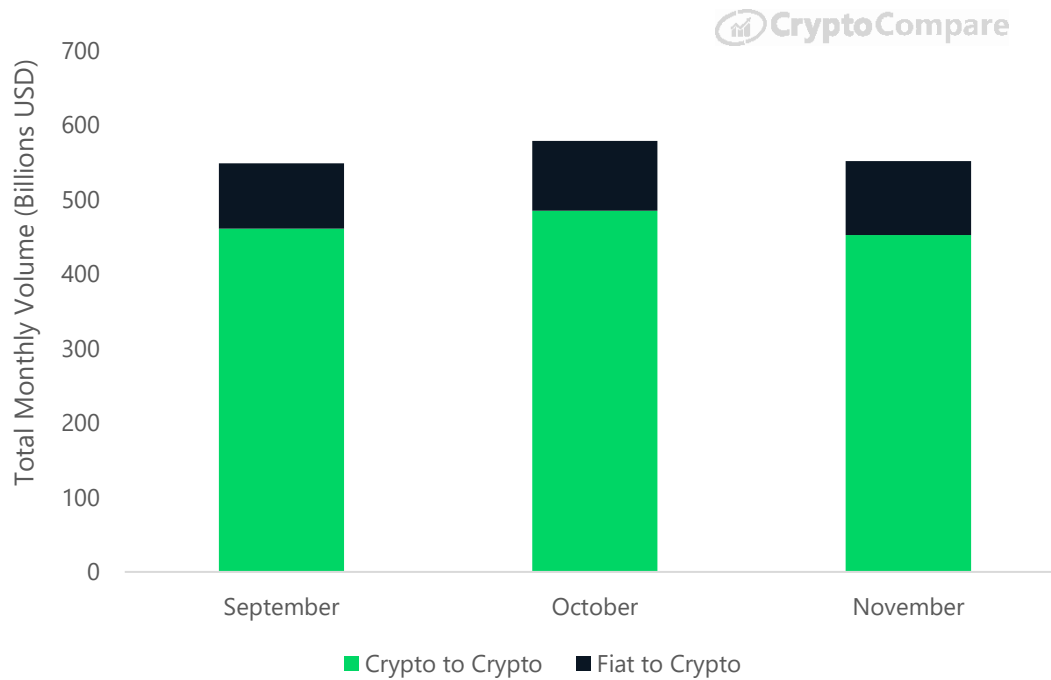


**Exchanges that charge taker fees represented 70% of total exchange volume in November, while those that implement trans-fee mining (TFM) represented 28%.**

Fee-charging exchanges traded a total of 389.77 billion USD in November (down 0.1% since October), while those that implement TFM traded 156.78 billion USD (down 14.1% since October). The remaining volume represented trading by exchanges that charge predominantly no trading fees, at 5.2 billion USD.

## 2 Segmentation by Fiat Pair Trading Capability

Figure 11 - Monthly Total Volume: Crypto to Crypto vs Fiat to Crypto Exchanges



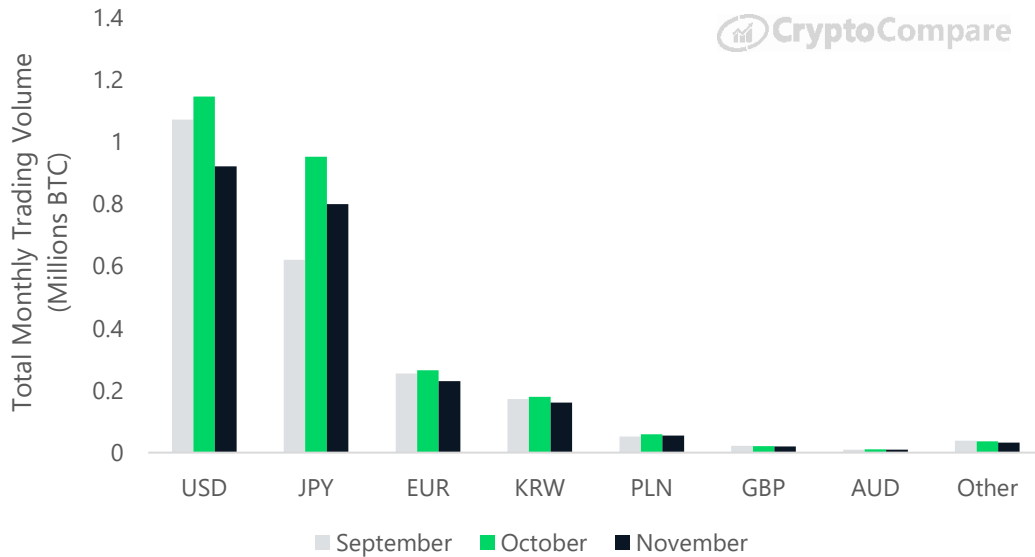
**Trading volume from exchanges that offer only crypto pairs represented 82.0% (452.63 billion USD) of total trading volume in November, while fiat to crypto exchanges represented 18.0% (99.12 billion USD). This is similar in proportion to the previous two months.**

Volume from crypto to crypto exchanges decreased 6.7% (to 453 billion USD) in November, while volume from exchanges that offer fiat pairs decreased 5.7% (to 99 billion USD).



### 3 Bitcoin to Fiat Volumes

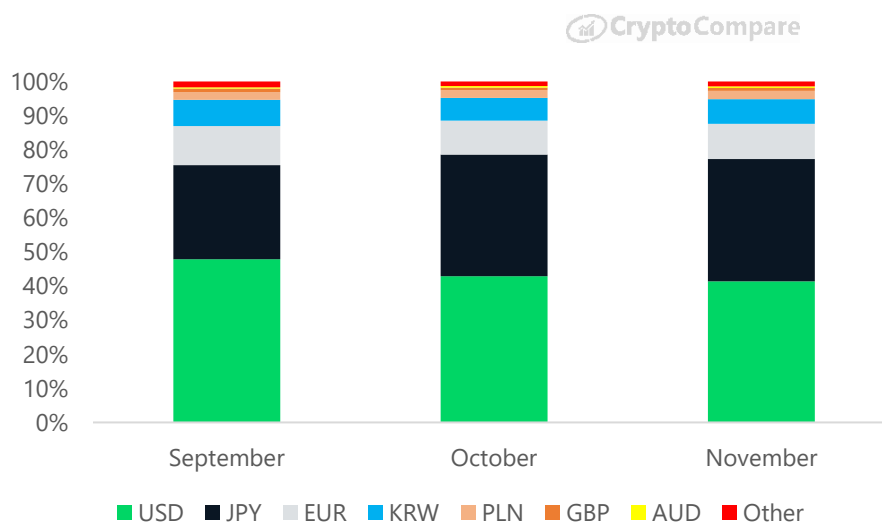
Figure 12 - Historical Monthly Bitcoin Trading Volume into Fiat



**In November, 71.0% of all Bitcoin trading into fiat was made up of the US Dollar. BTC to USD volumes decreased to 922 thousand BTC in November (down 20.0%).**

Meanwhile, BTC trading into JPY represented 800,000 BTC in November (down 16.0% since October), while BTC trading into EUR represented 230,000 BTC (down 13.0% since October).

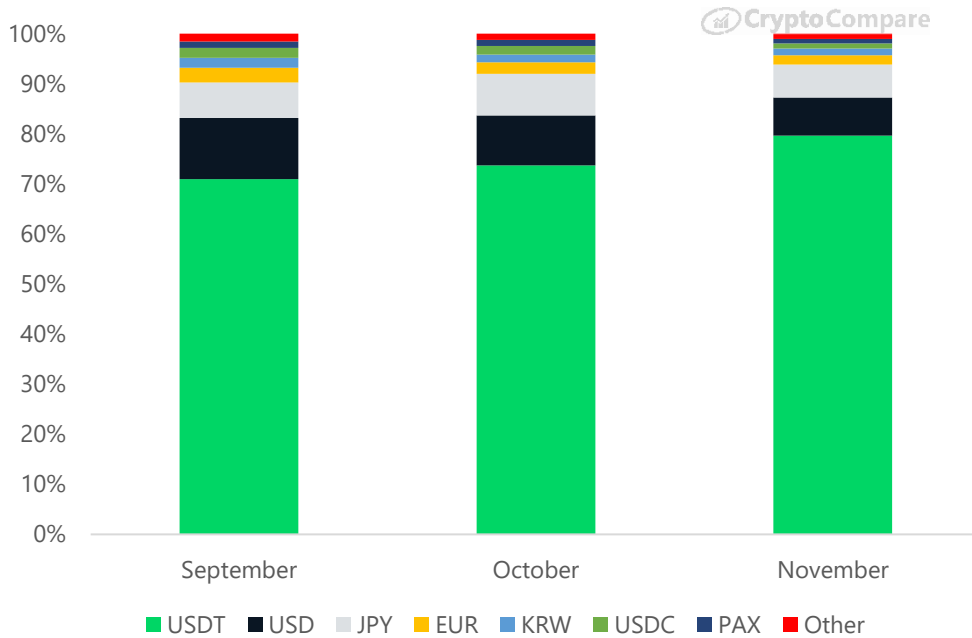
Figure 13 - Monthly Proportion of Total Monthly Bitcoin Trading into Fiat



**In November, JPY, EUR, KRW and PLN made up 95.27% of total trading from Bitcoin into fiat.**

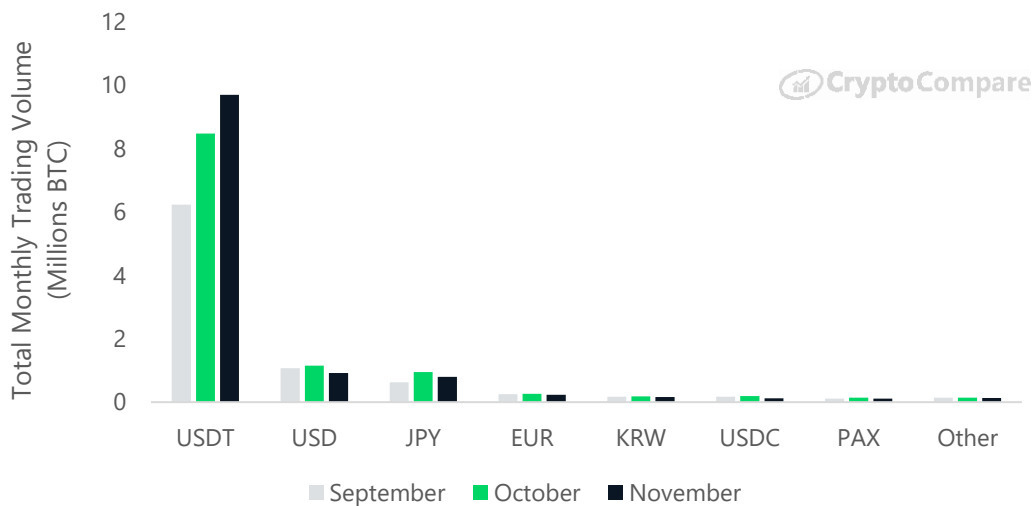
## 4 Bitcoin to Stablecoin Volumes

Figure 14 - Proportion of Total Monthly Bitcoin trading into Fiat or Stablecoins



**In November, BTC trading into USDT represented 79.65% of total volume (traded into fiat or stablecoin).**

Figure 15 - Historical Monthly Bitcoin Trading into Fiat or Stablecoins



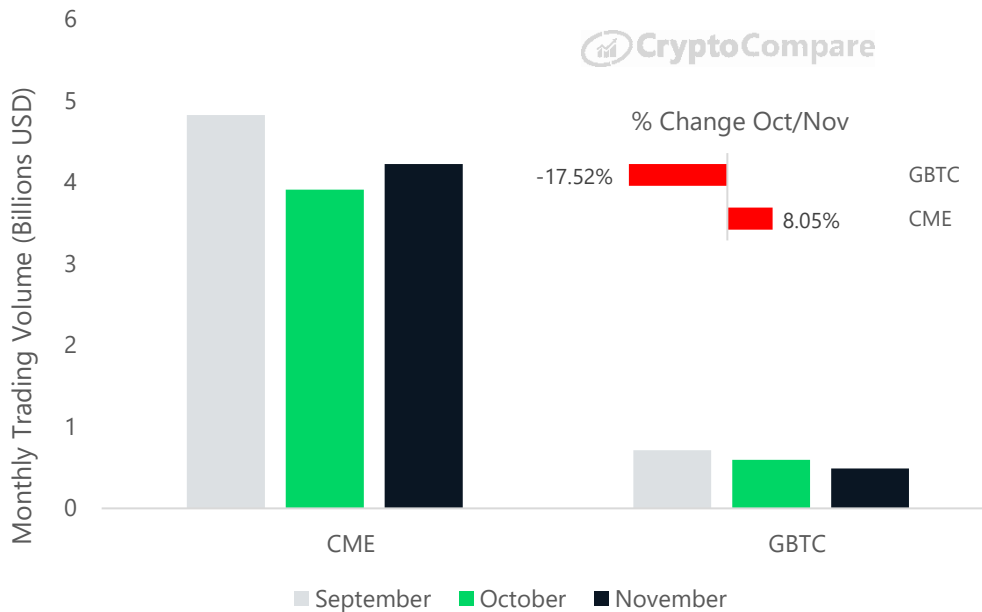
**BTC trading into USDT totalled 9.69 million BTC (up 14.48% since October).**

USDT continues to be the most popular stablecoin for trading with Bitcoin, followed by USDC, PAX and TUSD. USDT represents 97.52% of the total Bitcoin trading into these four coins.

# November Overview – Derivatives Products

## 1 Bitcoin Derivatives Monthly Volume: Institutional Products

Figure 16 – Total Monthly Bitcoin Institutional Product Volumes

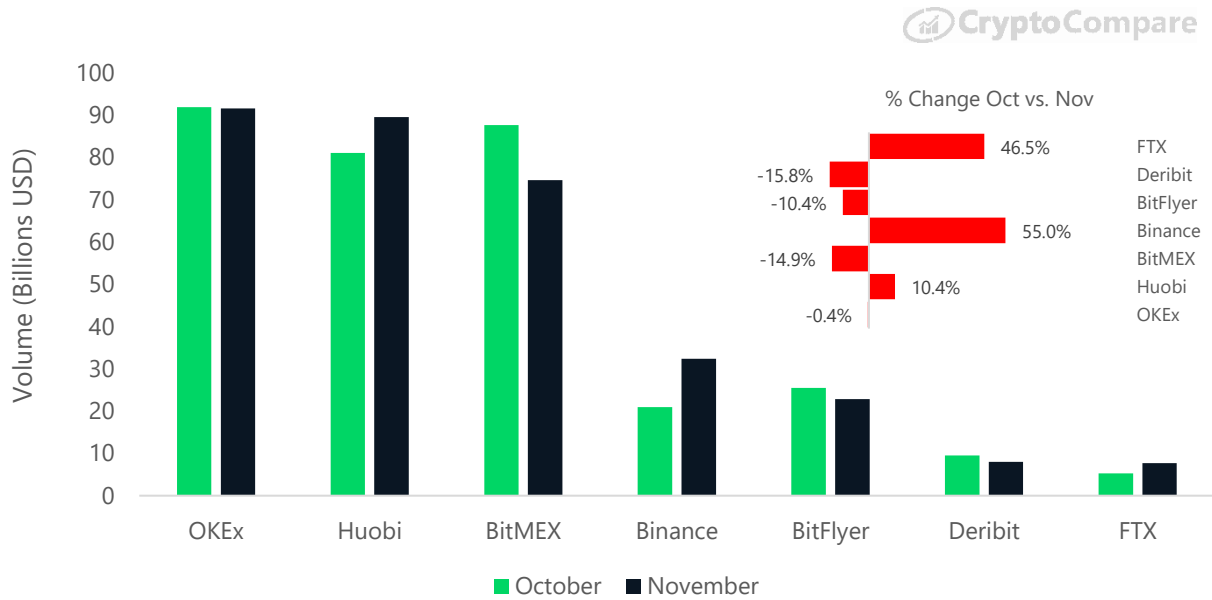


**Regulated bitcoin derivatives product volumes are still dominated by CME, whose total trading volumes are up 35.2% since October at 4.22 billion USD.**

CME’s bitcoin futures product volumes increased from a total of 3.12 billion USD traded in October to a total of 4.22 billion USD traded in November. Meanwhile, Grayscale’s bitcoin trust product (GBTC), decreased in terms of total trading volume with 490.71 million USD traded in November (down 17.5% since October).

## 2 Bitcoin Derivatives Monthly Volume: Crypto Exchanges

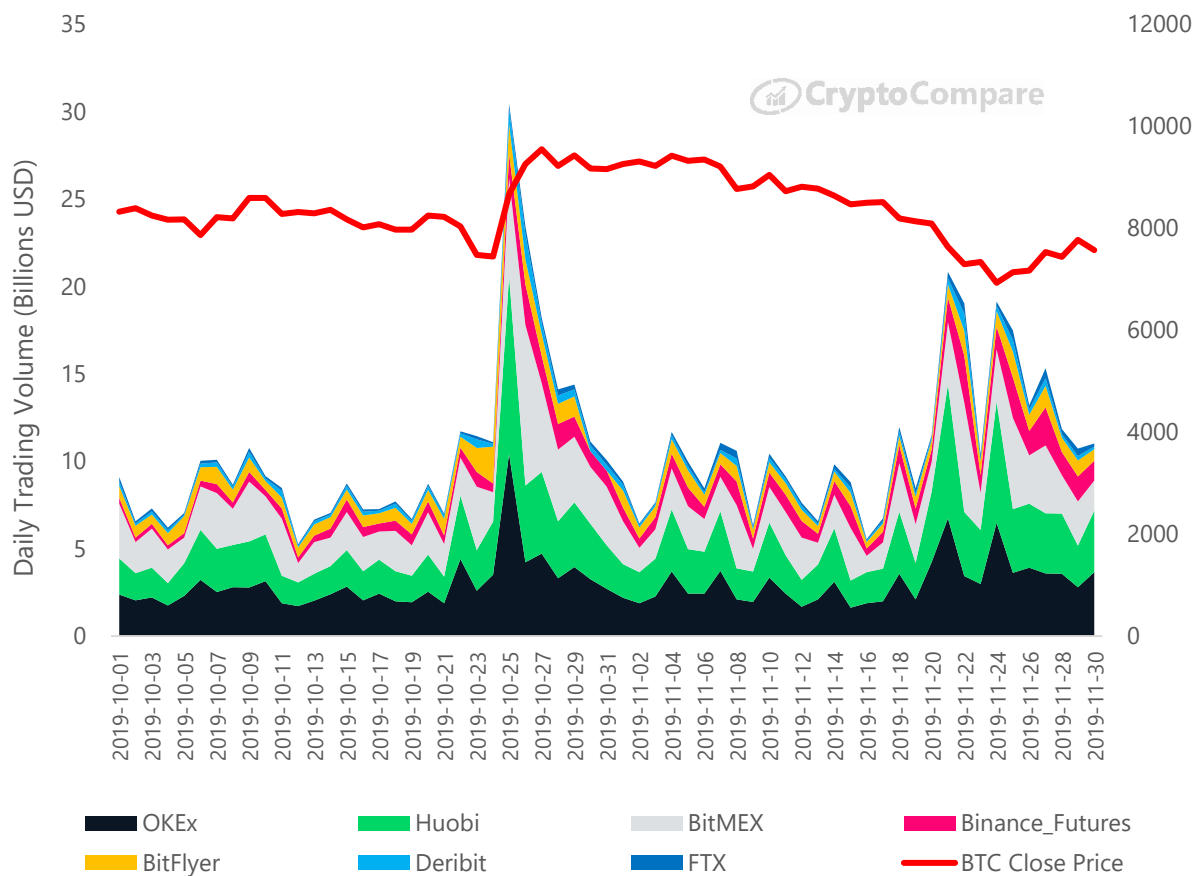
Figure 17 – Total Monthly Derivatives Exchange Volumes<sup>3</sup>



**OKEx was the top derivatives exchange in November, trading a total of 91.5 billion USD (down 0.4% since October). This was followed by Huobi with trading at 89.52 billion USD (up 10.4% since October).**

<sup>3</sup> All volumes in USD, based on an aggregation of all products. Note: BitMEX volumes represent their BTC/USD perpetual futures product. bitFlyer Lightning volumes represent their BTC/JPY perpetual futures product (in USD).

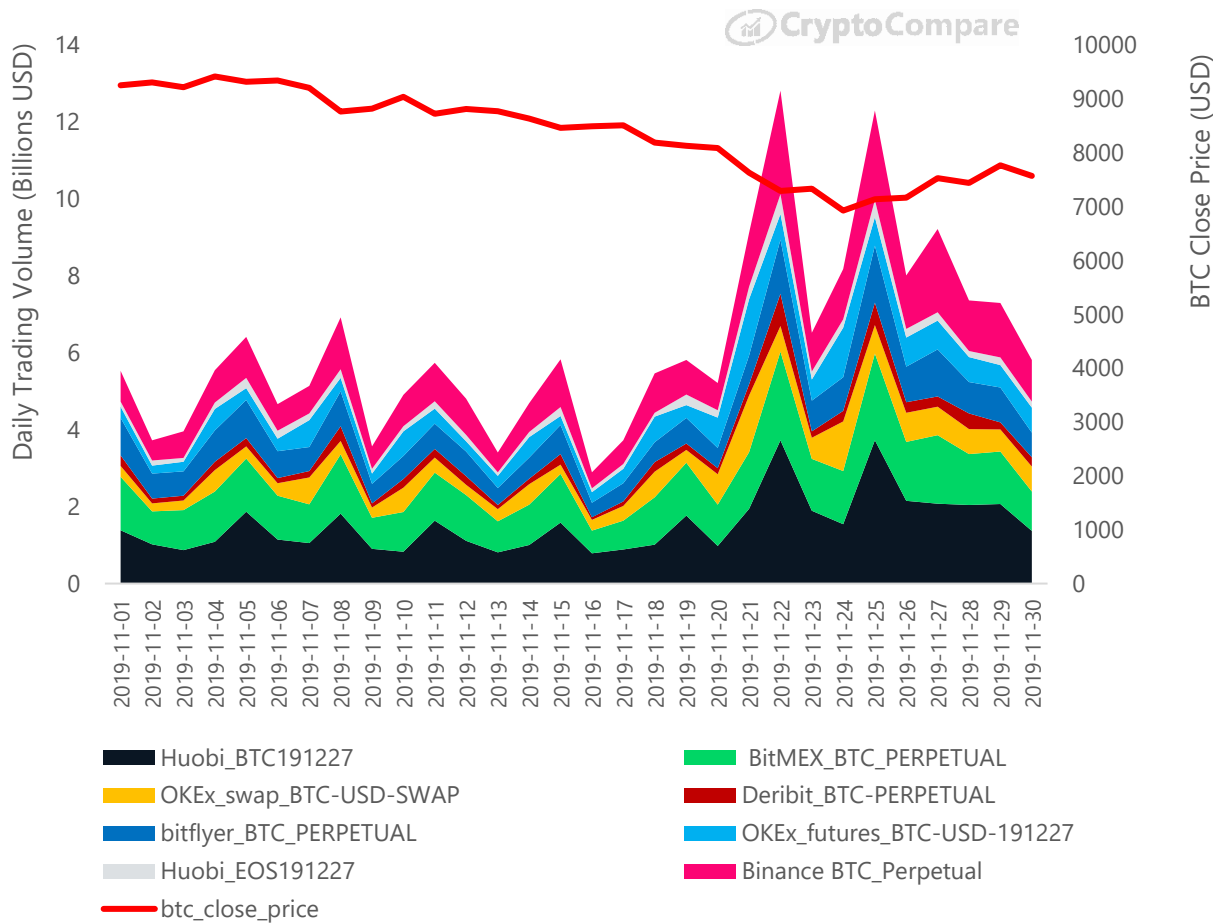
Figure 18 - Total Derivatives Exchange Volumes



**During the month of November, OKEEx represented the majority of daily derivatives volumes trading at \$3.05 Bn per day (28% market share) followed by Huobi (\$2.98 Bn, 27%), BitMEX (\$2.49 Bn, 23%) and bitFlyer (\$760 Mn, 10%).**

Smaller exchanges Deribit and FTX represented 2% of the market each.

Figure 19 - Top Products in November by Volume

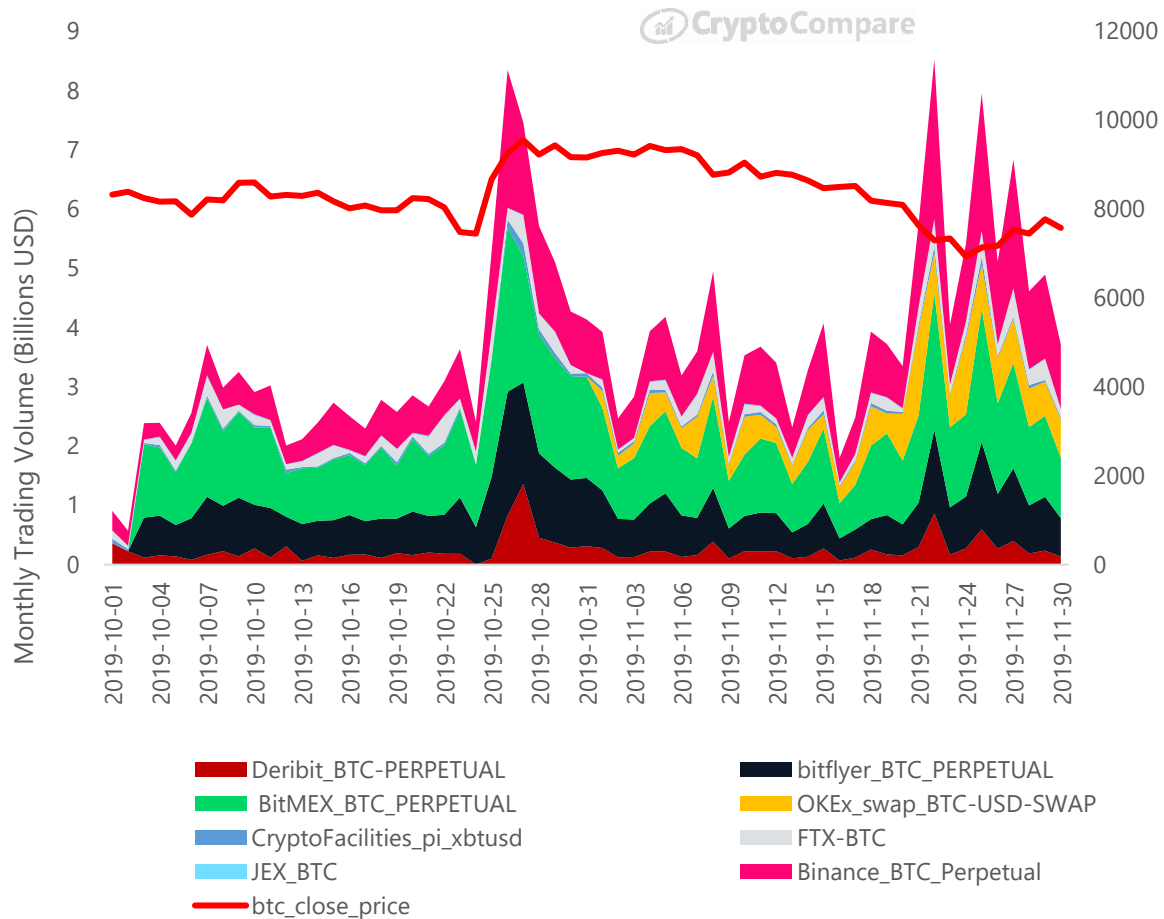


**In November, the most traded products by total monthly volume were Huobi’s Quarterly BTC Future (Huobi\_BTC191227 at \$46.1 Bn) and BitMEX’s BTC perpetual future (\$37.9 Bn), followed by Binance’s BTC perpetual future at \$32.3 Bn.**

On average, these three products traded \$1.5Bn, \$1.3Bn and \$1.1Bn per day in November.

### 3 Derivatives Exchange Volumes in November – Perpetual Futures Products

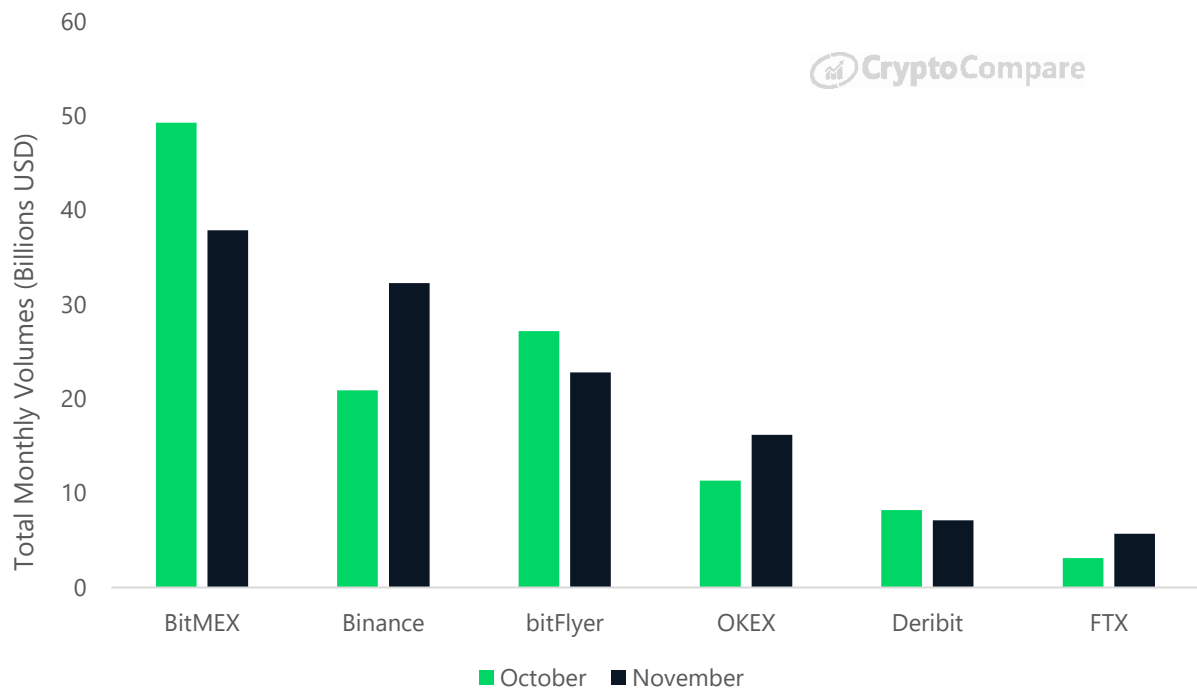
Figure 20 - BTC Daily Perpetual Futures Product Volumes



**In November, the most traded perpetual Bitcoin futures products by total monthly volume were BitMEX’s BTC perpetual (\$37.9Bn), followed by Binance’s and BitFlyer’s BTC perpetual futures products (\$32.3Bn and \$22.8Bn respectively).**

In average daily trading volumes for these products, BitMEX, Binance and BitFlyer traded a daily average of \$1.26Bn, \$1.07Bn and \$760Mn respectively.

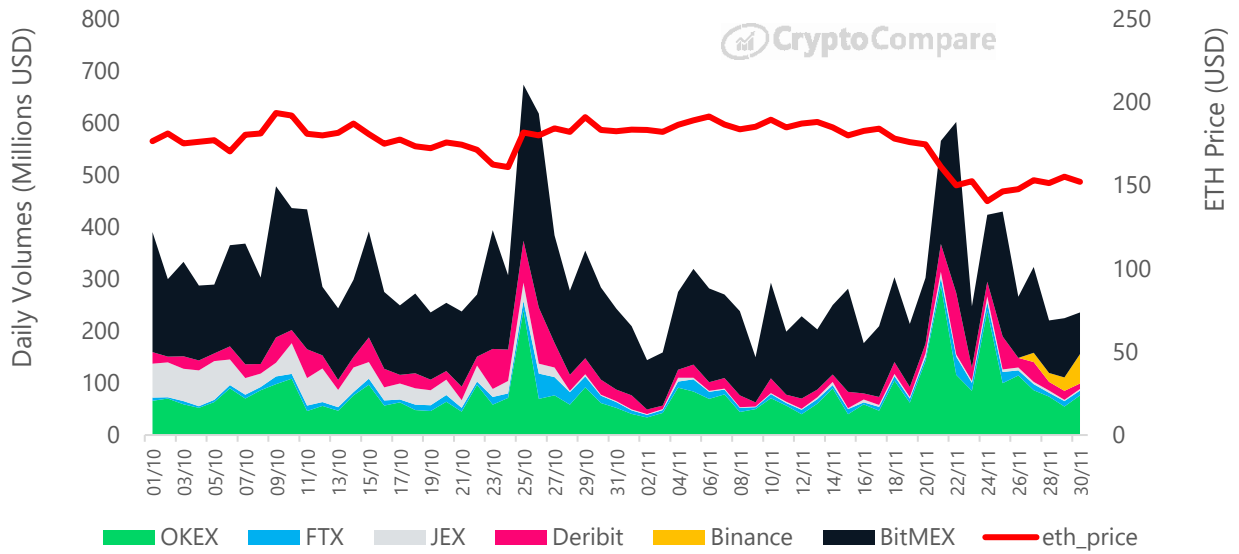
Figure 21 –BTC Monthly Perpetual Futures Product Volumes



**Since last month, BTC perpetual futures trading volumes from BitMEX decreased 23% to \$37.9Bn. Meanwhile Binance’s BTC perpetual futures increased 54% to \$32.3Bn.**

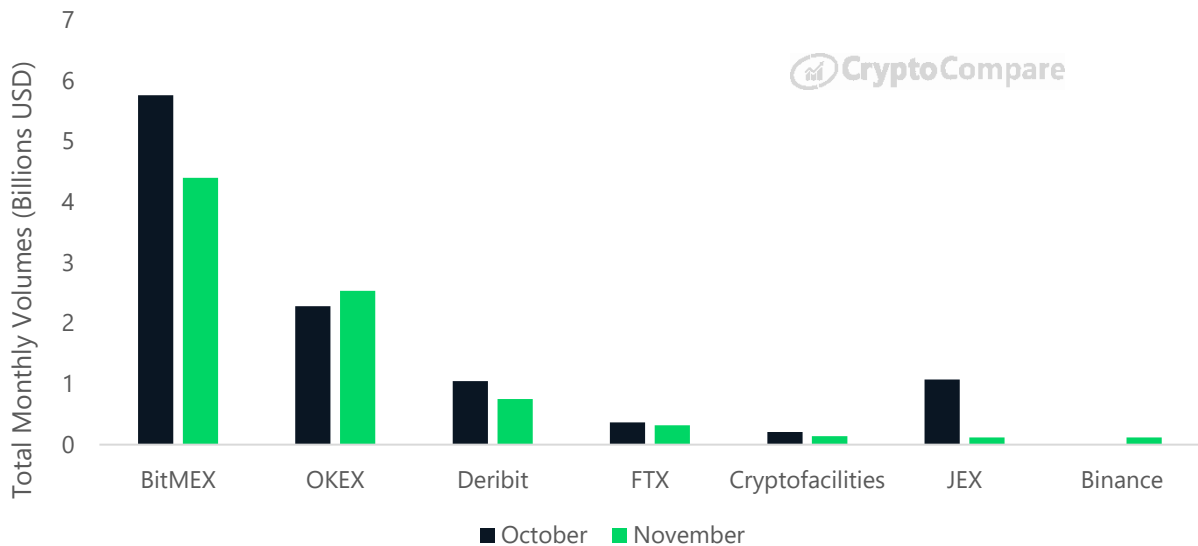


Figure 22 - ETH Daily Perpetual Futures Product Volumes



**On average, in November BitMEX, OKEx and Deribit traded \$147Mn, \$84.6Mn and \$25Mn in daily volume respectively. These three exchanges generate most of the trading volume for ETH perpetual futures and represent 48%, 28% and 8% market share respectively.**

Figure 23 - ETH Monthly Perpetual Futures Product Volumes



**BitMEX’s product was the most traded ETH perpetual future among exchanges that trade a similar product. Its volume decreased 24% (to \$4.4Bn) in November.**

BitMEX was followed by OKEx which traded \$2.54Bn on its ETH swaps market (up 11%). Deribit’s ETH perpetual futures traded \$750Mn in November, which constitutes a decrease of 29% since the previous month.

## 4 Exchange Volume Rankings

Table 1 - Top 10 Crypto to Crypto Exchanges by Average Daily Volume in November

	AVG DAILY VOLUME (USD)	TOTAL MONTHLY VOLUME (USD)	PAIRS	COINS	GRADE*
Bitforex	1,127,367,194	33,821,015,820	249	139	C
CoinBene	1,028,978,784	30,869,363,527	253	202	D
LBank	945,461,797	28,363,853,904	165	117	C
CoinEx	916,853,206	27,505,596,172	278	97	B
Binance	912,180,622	27,365,418,650	657	198	A
EXX	872,430,300	26,172,909,003	127	66	C
DigiFinex	782,142,290	23,464,268,698	244	126	C
ZB	776,431,722	23,292,951,667	191	67	D
BitZ	739,235,827	22,177,074,799	262	158	C
IDAX	709,521,636	21,285,649,085	219	125	B

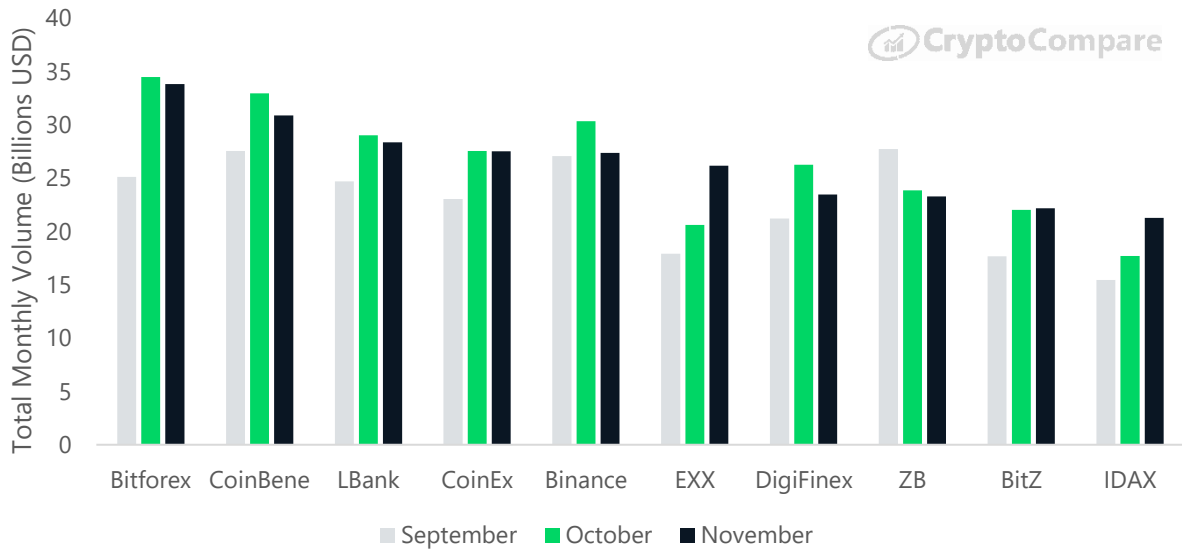
Table 2 - Top 10 Crypto to Fiat Exchanges by Average Daily Volume in November

	AVG DAILY VOLUME (USD)	TOTAL MONTHLY VOLUME (USD)	PAIRS	COINS	DOMINANT FIAT CURRENCY	GRADE*
P2PB2B	1,032,709,553	30,981,286,590	315	106	USD	C
Coinsbit	545,748,734	16,372,462,031	69	20	USD	C
Bithumb	247,496,816	7,424,904,471	93	93	KRW	C
Huobi Korea	197,268,500	5,918,054,999	397	172	KRW	B
Liquid	167,234,737	5,017,042,099	340	110	JPY	A
Coinbase	151,747,553	4,552,426,601	56	23	USD	AA
STEX	116,422,002	3,492,660,070	228	156	USD	E
Kraken	101,069,208	3,032,076,254	132	34	USD	A
Upbit	93,825,944	2,814,778,325	411	234	KRW	B
Bitfinex	90,355,474	2,710,664,214	400	146	USD	A

\*Please see the [Exchange Benchmarking Report](#) for more information on grading

## 5 Top Exchanges by Total Monthly Volume

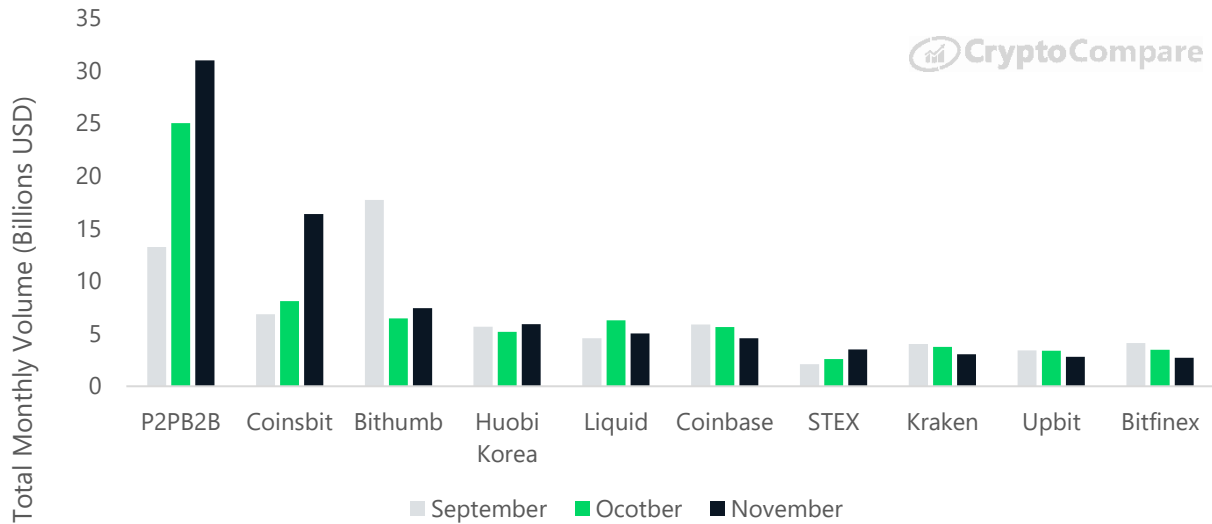
Figure 24 - Historical Monthly Volume - Top Crypto to Crypto Exchanges



**Bitforex was the top crypto to crypto exchange by total volume in November at 33.82 billion USD (down 1.91% since October). This was followed by CoinBene and LBank at 30.87 billion USD (down 6.34%) and 28.36 billion USD (down 2.23%) respectively.**

## 6 Top Fiat to Crypto Exchanges by Total Monthly Volume

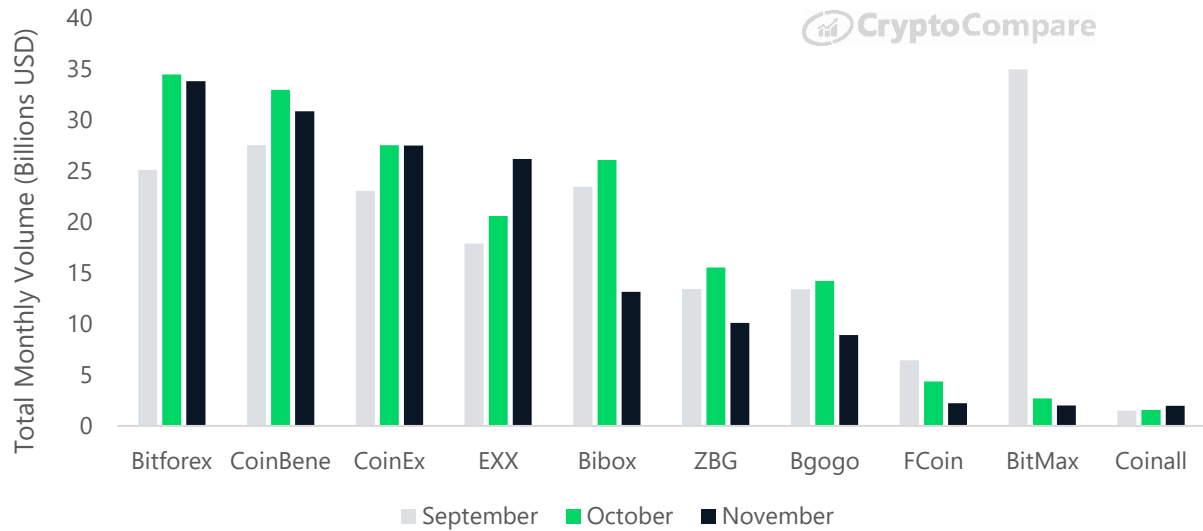
Figure 25 - Historical Monthly Volume - Top Fiat to Crypto Exchanges



**P2PB2B was the top fiat exchange by total volume in November at 30.98 billion USD (up 23.78% since October). This was followed by Coinsbit and Bithumb at 16.37 billion USD (up 102.1%) and 7.42 billion USD (up 15.24%) respectively.**

## 7 Transaction Fee Mining Exchange Volume

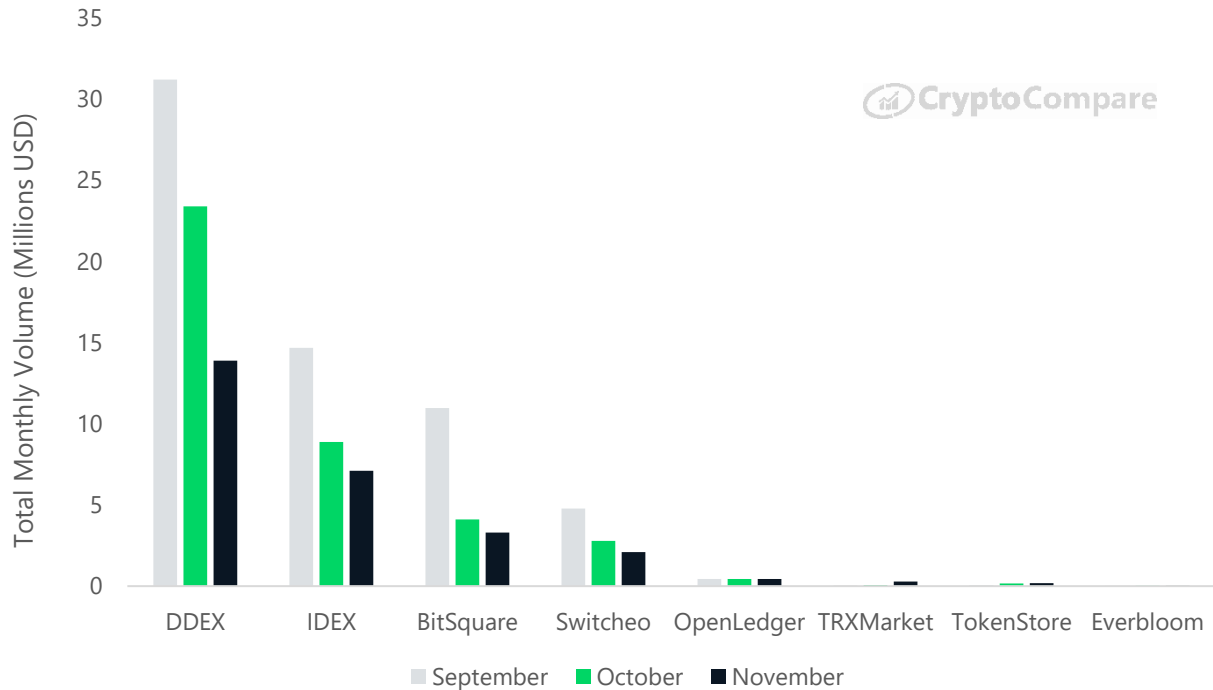
Figure 26 - Historical Monthly Volume - Top Transaction-Fee Mining Exchanges



**Bitforex was the top TFM exchange by total volume in November at 33.82 billion USD (down 1.91%), followed by CoinBene at 30.87 billion USD (down 6.34%) and CoinEx at 27.51 billion USD (down 0.11%).**

## 8 Decentralized Exchange Volume

Figure 27 - Historical Monthly Volume - Top Decentralized Exchanges



**DDEX was the largest DEX in November trading a total of 13.9 million USD (down 40.63%), followed by IDEX and BitSquare trading 7.11 million USD (down 19.97%) and 3.3 million USD (down 19.81%) respectively.**

DEXs represent only a small fraction of global spot exchange volume (0.01%), trading a monthly total of 27.31 million USD in November.