

# Bear Market Valuations

## An Analysis of Cryptocurrency Exchanges



**Published:** February 19<sup>th</sup>, 2019

**Version:** 1.0

## Introduction:

Bear Market Valuations (“BMV”) is a research group focused on identifying value opportunities in turbulent (and often depressed) markets. Given the dramatic price depression in the Cryptocurrency markets, BMV believes there may be specific sectors where overcorrection has occurred, and price has deviated from fundamental value. **BMV utilizes traditional financial valuation methods where possible**, and places little weight on estimations of future speculative growth or ‘adoption’.

While the contributors to, and authors of, BMV choose to remain anonymous, they have backgrounds in traditional financial and management consulting fields.

## Report Focus:

The first installment of BMV analyses are focused on select Cryptocurrency exchanges as BMV believes these provide the assets most easily valued in the space today. These exchanges are often referred to as the ‘picks and shovels’ of the industry, and have returns correlated with high volatility – not necessarily increasing prices. BMV has found the [Blockchain Transparency Institute’s](#) findings largely correspond with our own. As such, BMV will prioritize valuations for opportunities associated with legitimate (non-wash trading) exchanges.

For the near future, BMV will not focus on debt, equity or other more selective investment opportunities as these are not available to the general public.



# Cryptocurrency Exchanges | Overview

*Exchange economics traditionally lead to a highly concentrated exchange markets*



*Holding all else constant, the increasing benefits from incremental transaction volume tend to bias exchange markets into natural monopolies; empirical evidence from traditional equity markets supports this finding, with some caveats.*

***Throughout history, exchange markets (from medieval Fleece Fairs to equity markets) naturally consolidate over time; this behavior is driven by increasing returns to scale from the following factors:***

- **Larger markets reduce search costs:** Larger markets are objectively better than small markets to identify a trade counterparty to do business with, even in opaque or poorly traded assets
- **Higher volume provides better prices:** Larger markets reduce the risk of trade slippage, and lower the bid / ask spread
- **Larger markets provide better security:** Larger markets are economically incentivized to afford better security / comply with regulation, and have reputational incentives to discourage negative trading behavior



***Larger markets provide better trading experiences, which in turn attracts more traders.***

*Note 1: The explanatory rationale published above is highly reductive, and does not include considerations such as market features offered (e.g., margin trading, escrow, derivatives, etc.)*

*Note 2: With no physical goods to transport, historically financial markets tend to concentrate more than most other markets*

# Cryptocurrency Exchanges | Benchmarking

*Relative to traditional equity markets, cryptocurrency markets are oversaturated with exchanges*



*BMV believes traditional equity markets provide a valid (if crude) benchmark for forecasting future exchange concentration based on total asset value.*

Market	Asset Value <sup>1</sup>	Exchanges <sup>1</sup>	Value / Exchange
Equity Markets (Stock Markets)	\$300,000,000M	~60	~\$50,000M
Cryptocurrency <sup>2</sup>	\$120,000M	~240	~\$500M
Cryptocurrency (As percentage of Equity Markets)	4%	400%	<1%

*Even with generous profitability and future transaction volume growth assumptions, the cryptocurrency market appears dramatically oversaturated*

***Based on the above observations, we would expect to see a long-tailed exchange volume distribution with relatively few exchanges accounting for the majority of volume.***

<sup>1</sup> As of February 15<sup>th</sup>, 2019 | Some data sourced [here](#)

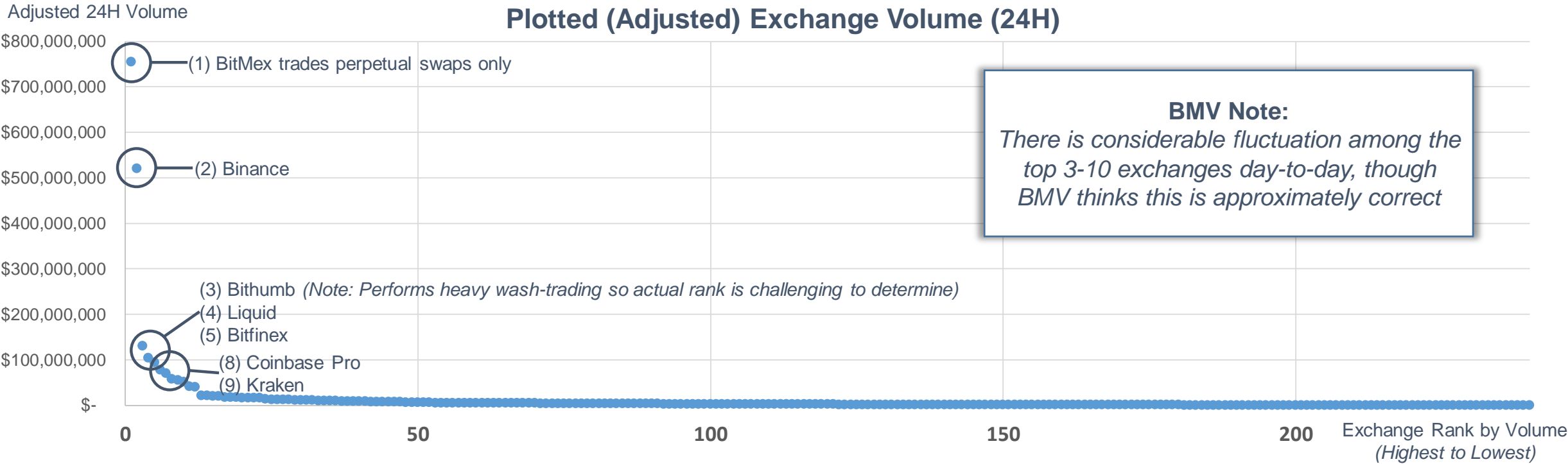
<sup>2</sup> Data from CoinMarketCap.com

# Cryptocurrency Exchanges | Volume Distribution



As expected, we observe a long-tailed distribution of exchanges by (BMV adjusted) volume

Due to significant observed wash-trading in the cryptocurrency market, BMV utilized the [Blockchain Transparency Institute's](#) adjustments where applicable to identify actual exchange transaction volume<sup>1</sup>.



**BMV believes the majority of transaction volume will (continue to) transfer from small exchanges towards the top 5-10 exchanges.**

<sup>1</sup> Based on CoinMarketCap.com; data from February 15<sup>th</sup>, 2019 (adjusted with BTI's December report finding) | Other adjustments were made to exchange volume based on BMV's internal analysis

# Cryptocurrency Exchanges | Non-Volume Considerations

*Volume is a good indicator of future success, but there are other considerations*



*The maturation of the 'cryptocurrency' space is highlighting other (non-volume) considerations that may be predictive of future exchange success.*

## ***BMV anticipates the following consumer trends will continue (and increase):***

- 1. Regulatory Clarity:** This includes both desire for definitive 'cryptocurrency' regulation from the G8, as well as regulatory adherence to existing licensing, AML / KYC, fraud mitigation, etc.
- 2. Asset Security / Custody Solutions:** The recurring security concerns (from the nearly \$1B stolen via hacks in 2018<sup>1</sup>, to Quadriga's cold wallet fiasco<sup>2</sup>) illustrate the high exchange counterparty risk; more sophisticated consumers will be less willing to accept these risks (and will preferentially select exchanges with robust custody solutions)
- 3. Platform Sophistication:** Increasingly the sophistication of the platform trading tools will become a differentiator as the market matures; this includes various offerings such as Margin Trading, Margin Lending, Derivatives, Futures, Fiat pairs, etc.

### **BMV Note:**

*In the near term, BMV is choosing to ignore potential new entrants into this exchange market (Fidelity Digital Assets, BAKKT, etc.) due to anticipated lack of initial volume; longer term the above considerations may make them successful players*

Note: Regulatory Clarity for the United States is in process | Source: <https://www.cnn.com/2018/12/06/bipartisan-lawmakers-look-for-cryptocurrency-rules-to-keep-us-competitive-1.html>

<sup>1</sup> <https://www.coindesk.com/2018-a-record-breaking-year-for-crypto-exchange-hacks>

<sup>2</sup> <https://www.bloomberg.com/news/articles/2019-02-15/quadriga-s-late-founder-revealed-crypto-storage-in-old-podcast>

# Cryptocurrency Exchanges | Top 10

Not all top 10 exchanges are equally positioned for future success (as of February 2019)



Rank <sup>1</sup>	Exchange	Launch	Headquarters	Fiat Pairings	Markets <sup>1</sup>	Compliance <sup>4</sup>	Trading Fees <sup>5</sup>	Token	Additional Notes
1	BitMex	Feb-2014	Hong Kong	USD	1	MED	<b>Taker:</b> 0.075% <b>Maker:</b> (0.025%)	–	Asset Lending, <b>Derivative market only</b>
2	Binance	Jul-2017	Malta	–	441	MED	<b>Taker:</b> 0.1% <b>Maker:</b> 0.1%	BNB	Stablecoins Enabled, Extremely Fast Development, Future DEX, <b>Severed JPY Regulatory Relationship</b>
3	Bithumb	Jun-2016	South Korea	KRW	75	MED / LOW	<b>Taker:</b> 0.15% <b>Maker:</b> 0.15%	–	<b>High wash trading observed, South Korea currency withdrawal limitations</b>
4	Liquid	Jan-2014 <sup>2</sup>	Japan	AUD, EUR, IDR, HKD, JPY, SGD, USD	184	VERY HIGH (Audited)	<b>Taker:</b> 0.15% <b>Maker:</b> (0.075%)	QASH	Margin Trading, Asset Lending, Advanced trading features, Unique MMO Technology, Cold Wallet, Future DEX, <b>Substantially Missed Development Deadlines, Slow Withdrawals, No Non-JPY App</b>
5	Bitfinex*	Oct-2012	British Virgin Islands	EUR, GBP, JPY, USD	107	HIGH / MED	<b>Taker:</b> 0.2% <b>Maker:</b> 0.1%	–	<b>Severed Audit Connection, Subpoena from CFTC</b>
6	HitBTC	Feb-2014	Hong Kong	–	776	LOW	<b>Taker:</b> 0.1% <b>Maker:</b> (0.01%)	–	<b>Very high withdrawal fees, questionable online reviews, high wash trading observed</b>
7	Huobi Global*	Sep-2013	Singapore	–	401	MED / LOW	<b>Taker:</b> 0.2% <b>Maker:</b> 0.2%	HT	<b>High wash trading observed</b>
8	Coinbase Pro	May-2014 <sup>3</sup>	USA	EUR, GBP, USD	32	HIGH	<b>Taker:</b> 0.3% <b>Maker:</b> 0.0%	–	Excellent App, Quick Buy, Popular Fiat Gateway to Other Exchanges
9	Kraken*	Jul-2011	USA	CAD, EUR, GBP, USD, JPY	72	HIGH	<b>Taker:</b> 0.22% <b>Maker:</b> 0.12%	–	Margin Trading, <b>Significant 2018 service issues</b>
10	OKEx*	Jan-2014	Hong Kong	–	422	LOW	<b>Taker:</b> 0.15% <b>Maker:</b> 0.1%	OKB	<b>Founder arrested on suspicion of digital currency fraud</b>

<sup>1</sup> Based on CoinMarketCap.com volume; data from February 15<sup>th</sup>, 2019 (adjusted with BTI's December report finding) | Other adjustments were made to exchange volume based on BMV's internal analysis

<sup>2</sup> Liquid is a merger of Quoinex and Qryptos; Liquid platform launched September 2018 | <sup>3</sup> Coinbase launched in 2011 | <sup>4</sup> Based on BMV internal analysis and regulatory licensing / audits; only audited exchanges can be deemed 'Very High' | <sup>5</sup> BitMex fees apply to entire leverage position | Liquid has fees enabled for non-fiat trading pairs; fiat pairs may have fees enabled in March 2019 (Unconfirmed) |

\*Offer lower fees for high volume traders; all fees shown are without discounts for spot markets only

Published: 2/19/2019

ADVISORY ONLY | CONTENT SUBJECT TO CHANGE



# Cryptocurrency Exchanges | Selection

Exchange Utility Token selection for deeper analysis



Based on the prior analysis, BMV believes only two exchanges with exchange tokens (Binance and Liquid) are well positioned for future success.

Rank <sup>1</sup>	Exchange	Launch	Headquarters	Fiat Pairings	Markets <sup>1</sup>	Compliance <sup>4</sup>	Trading Fees <sup>5</sup>	Token	Additional Notes
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6	HitBTC	Feb-2014	Hong Kong	–	776	LOW	Taker: 0.1% Maker: (0.01%)	–	Very high withdrawal fees, questionable online reviews, high wash trading observed
7	Huobi Global*	Sep-2013	Singapore	–	401	MED / LOW	Taker: 0.2% Maker: 0.2%	HT	High wash trading observed
8	Coinbase Pro	May-2014 <sup>3</sup>	USA	EUR, GBP, USD	32	HIGH	Taker: 0.3% Maker: 0.0%	–	Excellent App, Quick Buy, Popular Fiat Gateway to Other Exchanges
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## Binance Rationale

As the spot market with the leading volume, Binance may succeed as high volume begets more volume. Its primary risks are regulatory.



## Liquid Rationale

A relatively unknown exchange despite its high volume, Liquid may succeed as increased regulatory scrutiny drives volume towards this exchange. Its primary risks come from outside competitors (Fidelity Digital Assets, BAKKT).

**In the following slides, we will attempt to set a baseline valuation for BNB and QASH.**

<sup>1</sup> Based on CoinMarketCap.com volume; data from February 15<sup>th</sup>, 2019 (adjusted with BTI's December report finding) | Other adjustments were made to exchange volume based on BMV's internal analysis

<sup>2</sup> Liquid is a merger of Quoinex and Qryptos; Liquid platform launched September 2018 | <sup>3</sup> Coinbase launched in 2011 | <sup>4</sup> Based on BMV internal analysis and regulatory licensing / audits; only audited exchanges can be deemed 'Very High' | <sup>5</sup> BitMex fees apply to entire leverage position | Liquid has fees enabled for non-fiat trading pairs; fiat pairs may have fees enabled in March 2019 (Unconfirmed) |

\*Offer lower fees for high volume traders; all fees shown are without discounts for spot markets only



### VALUATION NOTE:

Both of these selected exchanges have very ambitious development goals for both their exchanges and for their utility tokens. For the purposes of this valuation, BMV has focused SOLELY on committed promises for these tokens, **and place little to no value on the option value of future development (which may be considerable, and explain any valuation discrepancies).**

As such, this is a BASELINE valuation, and should not be considered fair market value.

*BMV performed two analysis on the selected exchange utility tokens:*

#### ① Perpetuity Cash Flow

- Treats token buy commitments as **incoming cash flow**
- Conservatively utilizes a 20% **discount rate**
- In all places with potential **growth**, uses random walk forecasts (0%)
- Does not include any **future revenue sources**
- **Performs simplifications** where BMV believes it is appropriate
- Based on **2020 forecasted token supply**

**LOW** Risk from Changing Assumptions

#### ② Buy Pressure Review



- Reviews token buy commitments in the **context of liquidity**
- Utilizes **existing order book data**, with assumptions
- In all places with potential **growth**, uses random walk forecasts (0%)
- Does not include any **future revenue sources**
- Performs simplifications where BMV believes it is appropriate
- Based on **2020 forecasted token supply**

**MODERATE** Risk from Changing Assumptions

# Cryptocurrency Exchanges | Summary

Summary of BMV's Utility Token BASELINE Valuations



Token		(1) Perpetuity Cash Flow	(2) Buy Pressure Review	BMV Review
	<b>Binance Coin (BNB)</b>	<b>\$1.03 / BNB</b>  <i>(Slide 11)</i>	<i>Negligible</i>  <i>(Slide 12)</i>	BMV will continue to monitor BNB for valuation changes. The significant upside from future development may explain the token variation <i>(along with utility from token dust conversion)</i>
	<b>QASH (LQD)</b>	<b>\$0.01 – \$0.09 / QASH</b>  <i>(Slide 13)</i>	<b>\$0.32 – \$4.93 / QASH (2020F)</b>  <i>(Slide 14)</i>	BMV believes the QASH token represents a high-risk, high reward bet given the significant differential between its cash flow valuation and its buy pressure review (due to highly illiquid order books).  If fees for global users are enabled in March 2019, BMV believes that the QASH token may be significantly underpriced based on today's metrics. <b>NO POSITION SHOULD BE TAKEN UNTIL FEES ARE ENABLED   Liquid has a history of missing deadlines.</b>

*Both tokens have considerable option value from future development; this analysis does not include significant potential upside for both tokens from Decentralized Exchanges, other revenue sources (or buy-backs), further volume increases, transition from ERC20 Blockchain, etc.*

# Cryptocurrency Exchanges | (1) BNB Perpetuity

## Deconstructing the Binance Coin (BNB) Commitments



These commitments are evaluated with a highly conservative viewpoint to create a baseline valuation for the token.

#	BNB Commitments	Valuation Weight	Baseline Valuation	Weight Rationale
1	<b>Trading Fee Discounts</b>			
	▪ Year 1: 50%			
	▪ Year 2: 25%			
	▪ Year 3: 12.5%			
	▪ Year 4: 6.75%			
	▪ Year 5+: 0%			
		0%	—	Because there is no assurance that Binance is not immediately market selling all BNB received for trading fee discounts, this may just be increasing token velocity
2	<b>Quarterly Token Burn</b> (Token burn using 20% net profits until 100M BNB are burned)	100%	\$1.03 / BNB	BMV has treated the incoming token purchases as a perpetual cash inflow for the valuation   As Binance has only burned ~11% of the committed supply BMV has treated 'cash flow' as a perpetuity
<b>SUMMARY:</b>		<b>100%</b>	<b>\$1.03 / BNB</b>	This does not include any potential (and significant) upside associated with creating a new Tendermint-based distributed ledger

	Perpetuity Price Floor	Annualized	% of Total	Notes
A	Daily BNB Volume	\$ 14,600,000,000	100%	Projected from 02.17.2019 Daily Binance Volume (=\$40M*365)
B	Binance Quarterly Burn	\$ 37,600,000	0.3%	Projected from January 2019 \$9.4M Quarterly Binance Burn (=\$9.4M*4)
C	Cash Flow Perpetuity	\$ 188,000,000		Based on a 20% discount rate (given high volatility) and 0% growth (= $B/0.2-0.0$ )
D	Tokens Outstanding (2020F)	182,775,490		Assuming 5th and 6th burn rate continues (1.6M BNB Quarterly) (= $189M-1.6M*4$ )
E	2020F Value / Token	\$ 1.03	=C/D	

<https://ethereumworldnews.com/binance-burns-9-4-million-worth-of-bnb-on-its-6th-quarterly-coin-burn/> | [https://www.binance.com/resources/ico/Binance\\_WhitePaper\\_en.pdf](https://www.binance.com/resources/ico/Binance_WhitePaper_en.pdf)



*This secondary analysis is focused on understanding potential impacts from incremental BNB buy-pressure from BNB commitments.*

**Overview:**

In combination with the earlier analysis, BMV also assessed the impact that order book buy pressure might have on the price. For BNB, we do not see this causing a significant increase in price via redistribution.

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***As annual BNB buy-pressure from Binance commitments will comprise only 0.3% of BNB’s yearly trading volume, BMV forecasts little to no upward pressure on price from its current trading position.***

# Cryptocurrency Exchanges | (1) QASH Perpetuity

## Deconstructing the QASH token Commitments



**NOTE: LIQUID HAS NOT CONFIRMED FEES WILL BE ENABLED, "GLOBAL VOLUME", OR FEES AT THE TIME OF THIS ANALYSIS; THIS ASSESSMENT IS ONLY VALID PENDING CONFIRMATION OF THESE ASSUMPTIONS IN MARCH 2019**

#	QASH Commitments	Valuation Weight	Baseline Valuation	Weight Rationale
1	<b>Trading Fee Discounts</b> ▪ Perpetual 50% <i>Note: Option to automatically buy available</i>	100%	\$0.01 – \$0.09	Liquid currently does not have fees enabled for its primary volume pairs. Due to recent speculation, BMV believes fees for global users will be enabled in March 2019 – <b>this valuation is contingent upon this assumption and those laid out below.</b>
2	<b>VARIOUS</b> <i>(Liquid has noted other token commitments such as airdrops, and 'HODL campaigns')</i>	0%	–	One-time windfalls cannot be included in token valuation.
<b>SUMMARY:</b>		<b>100%</b>	<b>\$0.01 – \$0.09 / QASH</b>	This does not include any potential upside associated with creating a new DLT, Rakuten partnership, its sophisticated MMO technology, STO Platform, or multi-exchange order book integration underway

	Perpetuity Price Floor	Pessimistic	Realistic	Optimistic	Notes
A	Daily LIQUID Volume	\$ 100,000,000	\$ 100,000,000	\$ 100,000,000	Based on Historical volume (CMC and BMV observations); this is conservative
B	Daily (Global) LIQUID Volume	\$ 20,000,000	\$ 30,000,000	\$ 40,000,000	Short-Term, Fees will only be enabled on Global Accounts (= A*Global Estimate)
C	Adj. Trading Decrease (Global)	\$ 16,000,000	\$ 25,500,000	\$ 36,000,000	Assume trading volume will decrease once fees enabled (=B*Assumed Discount)
D	Adj. for Fee Token Resell	\$ 8,000,000	\$ 15,300,000	\$ 25,200,000	Liquid stated will not resell short-term, but cannot be certified (=C*Assumed Discount)
E	Adj. for QASH Discount Usage	\$ 4,800,000	\$ 11,475,000	\$ 22,680,000	Not all users will use QASH Token Discount (=D*Assumed Discount)
F	Daily Qash Buy Pressure	\$ 2,400	\$ 6,885	\$ 17,010	=E*Fees Est. (assumed between 0.1% - 0.15%); discount is 50%
G	Cash Flow Perpetuity	\$ 4,380,000	\$ 12,565,125	\$ 31,043,250	Annualized, no growth (=F*365/0.2-0.0)
H	2020F Value / Token	\$ 0.013	\$ 0.036	\$ 0.089	(=G/350,000,000 Qash Tokens)

[https://www.reddit.com/r/liquid/comments/apfsdn/weekly\\_liquid\\_discussion\\_thread/](https://www.reddit.com/r/liquid/comments/apfsdn/weekly_liquid_discussion_thread/)

# Cryptocurrency Exchanges | (2) QASH Buy Pressure Review

## Deconstructing the QASH token Commitments



**NOTE: LIQUID HAS NOT CONFIRMED FEES WILL BE ENABLED, "GLOBAL VOLUME", OR FEES AT THE TIME OF THIS ANALYSIS; THIS ASSESSMENT IS ONLY VALID PENDING CONFIRMATION OF THESE ASSUMPTIONS IN MARCH 2019**

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F	Daily Qash Buy Pressure	\$ 2,400	\$ 6,885	\$ 17,010	=E*Fees Est. (assumed between 0.1% - 0.15%); discount is 50%

### Overview:

When comparing this QASH buy-pressure against existing order books, this volume may potentially cause a very significant price increase due to the lack of QASH liquidity. As of February 17<sup>th</sup>, 2019 – a \$700 buy order would cause a 1% increase in price\*.

**After annualizing the QASH buy-pressure, (and holding all else constant) QASH may be bought up to prices between \$0.32 - \$4.93 / QASH depending on assumptions made\***

[https://www.reddit.com/r/liquid/comments/apfsdn/weekly\\_rliquid\\_discussion\\_thread/](https://www.reddit.com/r/liquid/comments/apfsdn/weekly_rliquid_discussion_thread/) | \* BMV internal Analysis – All primary QASH order books were assessed for Liquidity and averaged over multiple weeks, actual 1% increase was observed to cost \$683, with the YEN order book providing 60% of the weighted average; further assumptions were made in all cases around additional liquidity substantially increasing the price to achieve a 1% increase

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# APPENDIX

