

**DRW**

February 14, 2018

# **Cryptoassets**

## **Market Structure**

# DRW is active in ecosystem

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- DRW recognized bitcoin and underlying technology as opportunity in 2012
- Cumberland was founded in 2014 as a bitcoin trading desk, uniquely positioned between the traditional financial industry and the nascent cryptoasset space
- Today, Cumberland specializes in providing two-sided, institutional-sized liquidity to counterparties around the world
- Cumberland also manages a long portfolio of cryptoassets and pursues strategic opportunities in these emerging markets

# Cryptoassets

- Terminology
- Bitcoin was first cryptoasset, launched in 2009
- Today, over 1500 cryptoassets exist
- Volumes and market caps still skewed toward bitcoin and a handful of others



Source: coinmarketcap.com, February [12]

# Sizing the Market

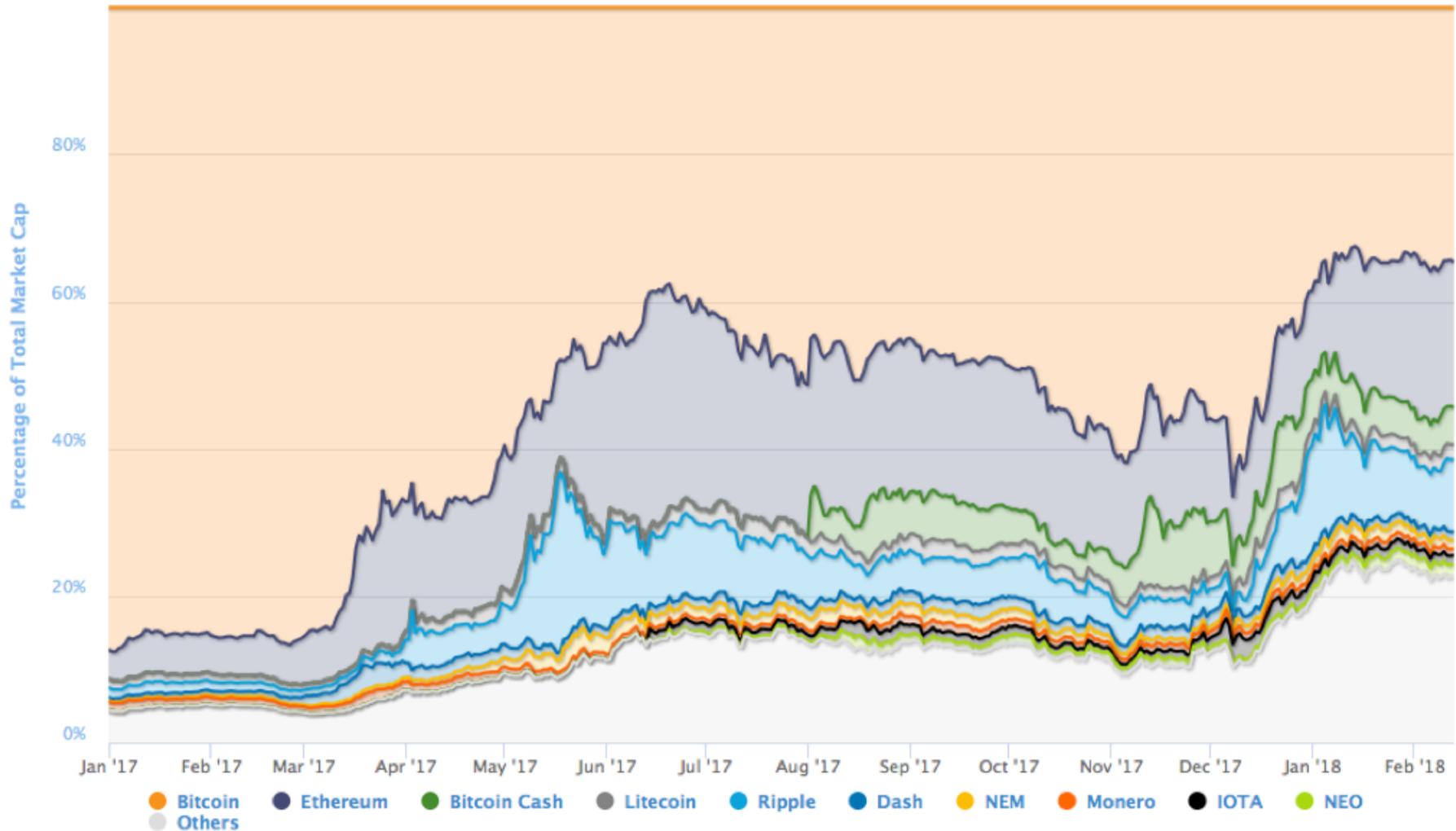
Total Market Capitalization and  
Daily Trading Volume (through 2/12/18)



Source: Coinmarketcap.com

# Sizing the Market

Percentage of Total Market Capitalization (through 2/12/18)



Source: Coinmarketcap.com

# Spot Trading Conventions

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- 24/7 market
- Very small price increments – generally 1 penny for bitcoin/USD
- Cryptocurrencies are highly divisible; for example, can buy/sell as little as .00000001 bitcoin (a satoshi)
- Combination of tiny price increments and minimum lot sizes for trading means highly fluid and often, very thin, order books on exchanges

# Spot Exchanges

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- Over 100 “exchanges” around the world trade bitcoin and other top cryptoassets

- Largest exchanges include:

- Bitfinex (HK)
- Coinbase/GDAX (US)
- Bitstamp (Slovenia/UK/Luxembourg)
- Bitflyer (Japan)
- Gemini (US)
- Kraken (US)
- HITBTC (UK/Europe)
- Bit-X/Luno (UK)
- cex.io (UK)
- itBit (Singapore and US)



- Cumberland is an active participant on exchanges with meaningful volume

# Korean Exchanges

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- In recent months, South Korean exchanges have grown in importance
- In December, reported to have about 20% of world cryptoasset volumes and to be third biggest market in world (after US and Japan)
- New regs in effect at end of January

# Challenges on Spot Exchanges

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- Difficult to weave together liquidity across multiple exchanges and jurisdictions due to several factors, including:
  - Technology
  - Concerns about deceptive trading
  - No standard best practices
  - Banking relationships have been fickle
  - Capital inefficiency
  - Security and transparency
  - Slow to move money and assets in and out
- High fees

# Arbitrage and Algo Trading in Cryptoassets

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- It often appears that markets are “crossed”, meaning that it looks possible to buy on one exchange for less than you could sell on another
  - Korean exchanges, for example
  - In theory, crosses should be eliminated by arbitrage
  - There are structural reasons for price differences, including limitations and delays
- Algo trading is developing in pockets of the markets
  - Most exchanges are hosted “in the cloud”
  - Low latency is not yet a significant differentiator

Source	Pair	Volume (24h)	Price	Volume (%)
Upbit	BTC/KRW	\$783,731,000	* \$15,367.50	6.83%
Bitfinex	BTC/USD	\$582,399,000	\$12,636.00	5.08%

Source: Coinmarketcap.com

# OTC Cryptoasset Trading

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- A meaningful portion of all cryptoasset market volumes occur away from exchanges; many with over-the-counter (OTC) traders
- DRW's subsidiary, Cumberland, trades with counterparties in the OTC market in institutional size
- By weaving together liquidity across counterparties and exchanges, OTC traders offer:
  - Ability to trade large, institutional sizes
  - Competitive all-in pricing
  - Quick settlement and payment (usually less than 24 hours)

# bitcoin Futures Markets

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- CFE launched bitcoin futures on December 10; CME followed on December 17
- Other exchanges likely to launch cryptoasset based futures in coming months
- The creation of these products is positive for the cryptoasset industry
  - Overall maturity as an asset class
  - Established and regulated exchanges involved
  - Dialog between exchanges and community is important
    - new exchanges
    - new products
- Challenges remain with settlement mechanisms
  - Could be dislocations in the future

# bitcoin Futures Markets

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	<b>CFE</b>	<b>CME</b>
<b>Contract Size</b>	<b>1 bitcoin</b>	<b>5 bitcoins</b>
<b>Open Interest</b>	<b>~6,000 contracts</b>	<b>~2,000 contracts</b>
<b>Daily Volume</b>	<b>5,000-15,000 contracts</b>	<b>1,000-3,000 contracts</b>
<b>Settlement</b>	<b>Cash</b>	<b>Cash</b>
<b>Reference Price</b>	<b>Auction price on Gemini spot exchange</b>	<b>Prices across spot exchanges (Bitstamp, GDAX, itBit and Kraken)</b>
<b>Tick Increment</b>	<b>\$10 per bitcoin</b>	<b>\$5 per bitcoin</b>

# Foreign Regulation

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- Cryptoassets represent a truly global asset class, like FX
- Governments around the world are trying to figure out how to regulate bitcoin and other cryptoassets with various approaches
  - China banned exchanges in September
  - New regs in South Korea require trading through “real-name” bank-accounts
  - Japan has put regulations in place that require exchanges to register and apply to the FSA for authorization
  - France recently announced formation of a task force to propose framework for regulations

# US Regulatory Guidance

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- CFTC has indicated that bitcoin is a commodity and allowed futures contracts; recent fraud actions
- SEC has indicated that most cryptoassets are securities and should be regulated as such
- IRS has announced "virtual currency" is to be treated as property
- Treasury has decribed concerns about cryptoassets facilitating criminal activities
- Opportunities for regulators to provide additional clarity

# Proposed Regulatory Approach

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- US should adopt a smart, principles-based regulatory framework that encourages professional, responsible market participants to build and invest in cryptoasset businesses in the US
- To do so, market will require:
  - More certainty as to legal status of cryptoassets
  - Better guidance about how financial institutions can provide cryptoasset services
  - Zero-tolerance for fraud, scams and abuse
- Suggest a TAC working group to look into these issues in depth to make specific recommendations to the CFTC consistent with this approach

**DRIV**

**Q&A**