

The background of the slide is a high-angle, wide shot of the Chicago skyline at sunset. The sky is a mix of orange, pink, and light blue. The city's skyscrapers are densely packed, with many windows glowing with interior lights. The Lake Michigan is visible in the distance, reflecting the sky's colors. A large, white, semi-transparent triangle is overlaid on the left side of the image, pointing towards the center.

# Bitcoin and Cboe Bitcoin XBT Futures

Interactive Brokers Webcast

Russell Rhoads, CFA

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- ❖ Introduction to Bitcoin
- ❖ Cboe Entry into Cryptocurrency Market
- ❖ Gemini
- ❖ Contract Specs
- ❖ Bitcoin Price Action
- ❖ Resources
- ❖ Questions / Contact



# What is a Bitcoin?

- ❖ The concept of a bitcoin was introduced in a paper by Satoshi Nakamoto in 2008
- ❖ The timing of the paper is significant as it came on the heels of the Great Financial Crisis
- ❖ The core idea of bitcoin is as a decentralized financial system that is not controlled by just a few people



# What Bitcoin Is Not

- ❖ Bitcoin is not a currency
- ❖ The terms digital currency as well as cryptocurrency have both been developed to describe bitcoin
- ❖ A common analogy for bitcoin is gold as bitcoin is mined and the supply of bitcoin is finite
- ❖ As time goes by the number of new bitcoins being awarded to miners is diminishing
- ❖ Eventually the number of bitcoin outstanding will top out at 21 million sometime in 2140



# Why Would Anyone Accept Bitcoin?

- ❖ For retailers there is a very low transaction fee when compared to accepting credit cards
- ❖ Once a transaction has been verified by the bitcoin network it may not be reversed
- ❖ As a global currency bitcoin can expand your customer base
- ❖ Bitcoin may be converted into any currency you choose



- ❖ Blockchain is the technology that is behind bitcoin
- ❖ The bitcoin blockchain is an open ledger which offer complete transparency regarding the bitcoin ecosystem
- ❖ It is a collection of all bitcoin transactions since inception in 2009
- ❖ The revolutionary aspect of blockchain technology is that no central point of failure can bring the system down
- ❖ Most of the focus of blockchain technology has been on potential financial applications, but there are many other potential uses such as logistics or inventory management



- ❖ Bitcoin mining means adding more bitcoin to the network
- ❖ No mining means no new bitcoins, but it also means no transaction confirmations
- ❖ Mining has become very resource intensive and costly over the past few years
- ❖ Net bitcoins are awarded about every ten minutes and the difficulty associated with mining bitcoins varies by the computing power on the bitcoin network





- ❖ In 2009 very little computational power was needed to be a bitcoin miner and mining was done with traditional CPU's
- ❖ As mining involves solving a complex mathematical problem it was discovered the GPU's (video cards) did a better job for mining, but also used much more power
- ❖ Now specific hardware and chips known as application-specific integrated circuits are used for bitcoin mining, but they use even more power and also generate heat



- ❖ The bitcoin blockchain has never been hacked and it is highly unlikely that it will ever be successfully hacked in the future
- ❖ Bitcoins that have been lost to hackers in the past were the result of services that have been built on top of the bitcoin network having been compromised



# Why the Network is Secure

- ❖ The bitcoin network is decentralized and no central point of failure will impact the whole network
- ❖ Strong cryptography guarantees the integrity and chronological order of the blockchain and associated transactions
- ❖ Individual wallets are protected by a private key which needs to be provided whenever an outgoing transaction is sent to the network
- ❖ The mining operations use a distributed consensus system that confirms and rejects transactions using a complex computational process.



- ❖ Cboe is uniquely positioned to create and support multi-asset cryptocurrency trading
- ❖ We have a proven ability to foster new markets and new products having successfully brought one of the most successful new trading assets to market (VIX<sup>®</sup>)
- ❖ Partnering with Gemini, a regulated market, gives us additional comfort and transparency with respect to underlying pricing and contract settlement



- ❖ Gemini is the world's first licensed bitcoin and ether exchange and custodian and is regulated by the New York State Department of Financial Services
- ❖ The Gemini Exchange enables investors to trade and custody digital assets on a fully licensed, compliant, and secure platform

[www.gemini.com](http://www.gemini.com)



- ❖ Cboe is leveraging its product development expertise in translating complex investment ideas into straightforward tradable instruments
- ❖ Bitcoin XBT<sup>SM</sup> futures are designed for traders who want to implement simple hedge strategies for a new asset class
- ❖ These futures are cash settled which provides exposure to bitcoin without the need to hold the underlying
- ❖ The decision to launch these futures was based on demand from our most sophisticated, professional customers



Contract Name	<ul style="list-style-type: none"><li>• Cboe Bitcoin (XBT) Futures</li></ul>
Listing Date	<ul style="list-style-type: none"><li>• December 11, 2017</li></ul>
Symbols	<ul style="list-style-type: none"><li>• Futures = XBT / Settlement = XBTS</li></ul>
Contract Multiplier	<ul style="list-style-type: none"><li>• 1 XBT Futures = 1 bitcoin</li></ul>
Minimum Price Intervals	<ul style="list-style-type: none"><li>• 10.00 Points (\$10)</li><li>• 0.01 Point (\$0.01) Each Leg of a Spread</li></ul>

## Contract Expirations

- Four Near Term Weekly
- Three Serial Months and Quarterly

## Extended Hours (Chicago Time)

- Monday 5:00 pm to 8:30 am
- Tuesday to Friday 3:30 pm to 8:30 am

## Regular Hours (Chicago Time)

- Monday to Friday 8:30 am to 3:15 pm

## Standard Contract Settlement Date

- 2 business days prior to 3<sup>rd</sup> Friday

## Settlement Value

- Gemini auction price at 4:00 pm NY time



- ❖ The introduction of derivatives trading activity focuses more attention on an underlying market
- ❖ This increase in market participants may lead to more efficient price discovery
- ❖ Regulated derivatives based on cryptocurrencies may attract certain professional traders that have restrictions regarding directly trading the spot market
- ❖ With more arbitrageurs coming into the bitcoin market we would expect reduced price dislocations between cash markets



Initial Contracts –

**January 17, 2018**

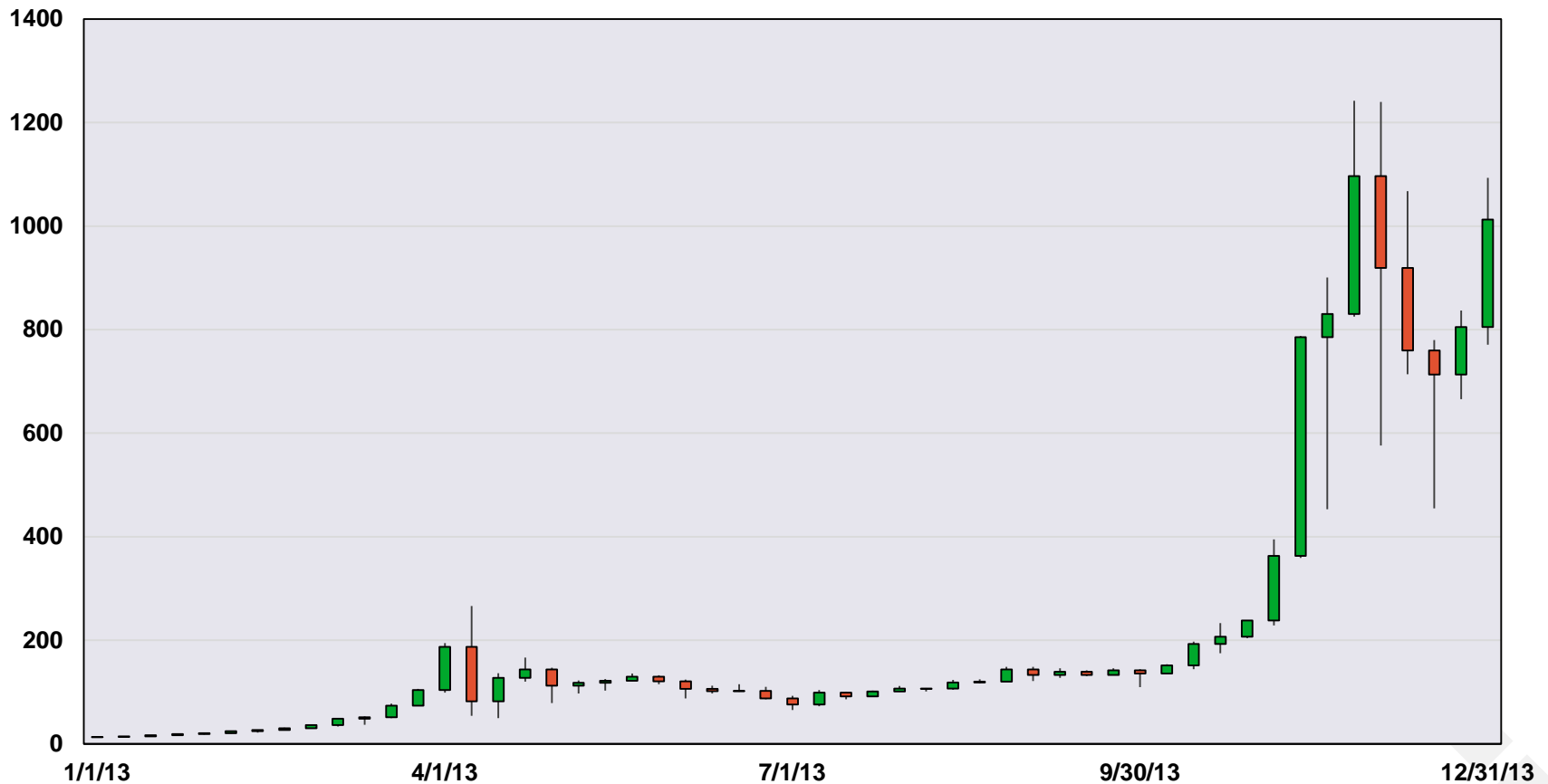
**February 14, 2018**

**March 14, 2018**

**Settlement Based on 4:00 pm Eastern  
Gemini Auction Price**

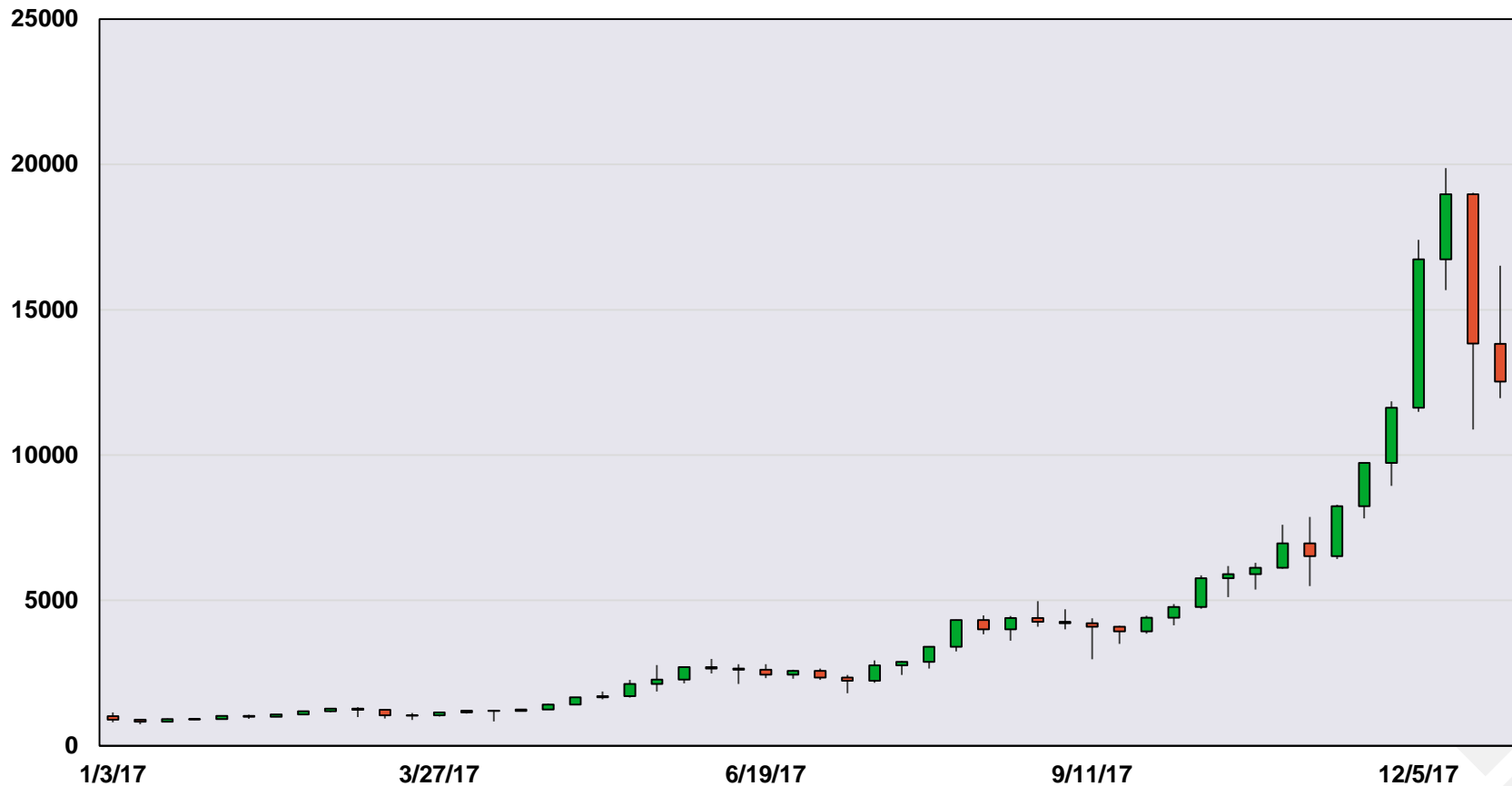


## 2013 Weekly BTC / USD

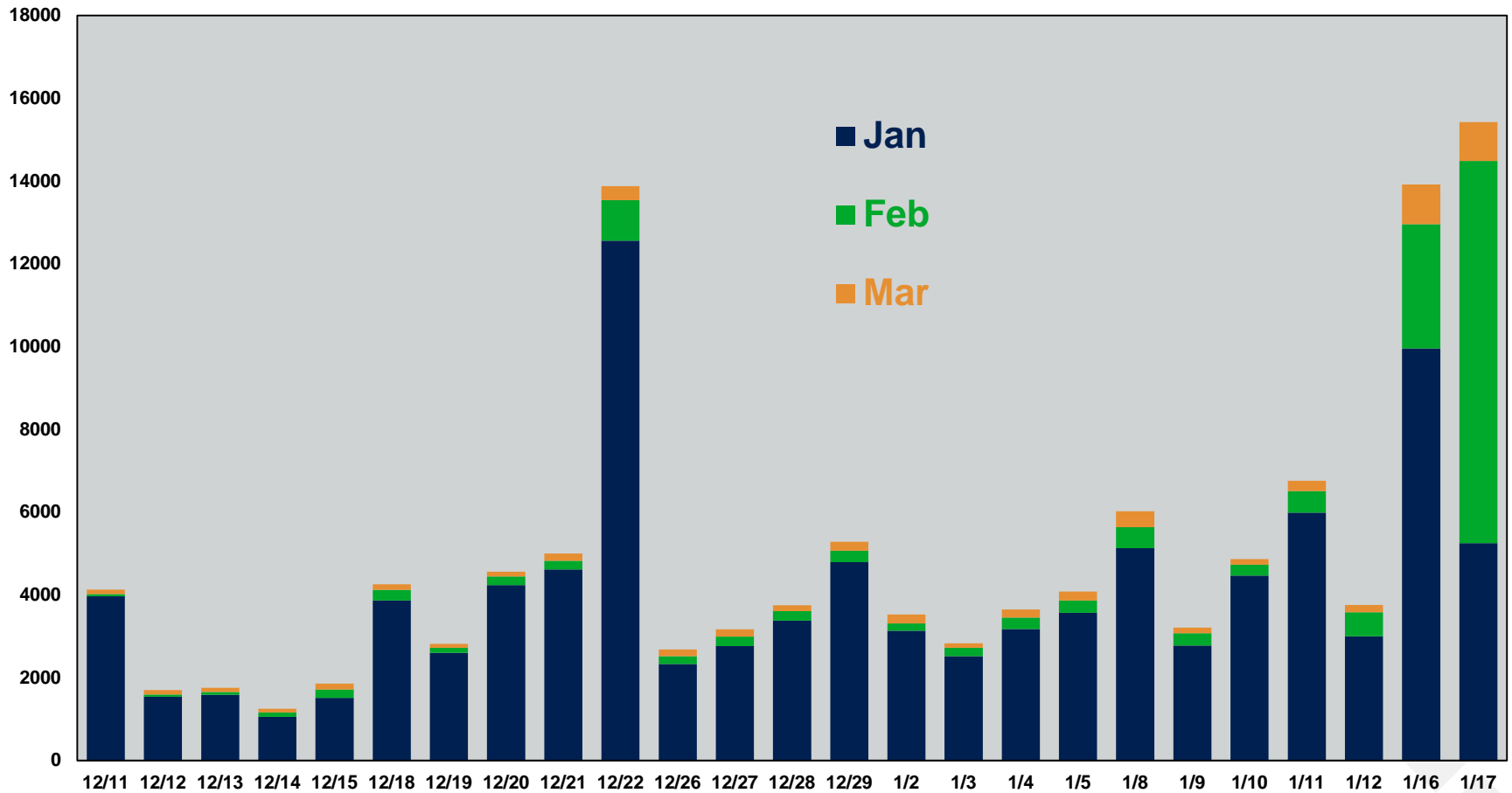


# Bitcoin Price Action

## 2017 Weekly BTC / USD

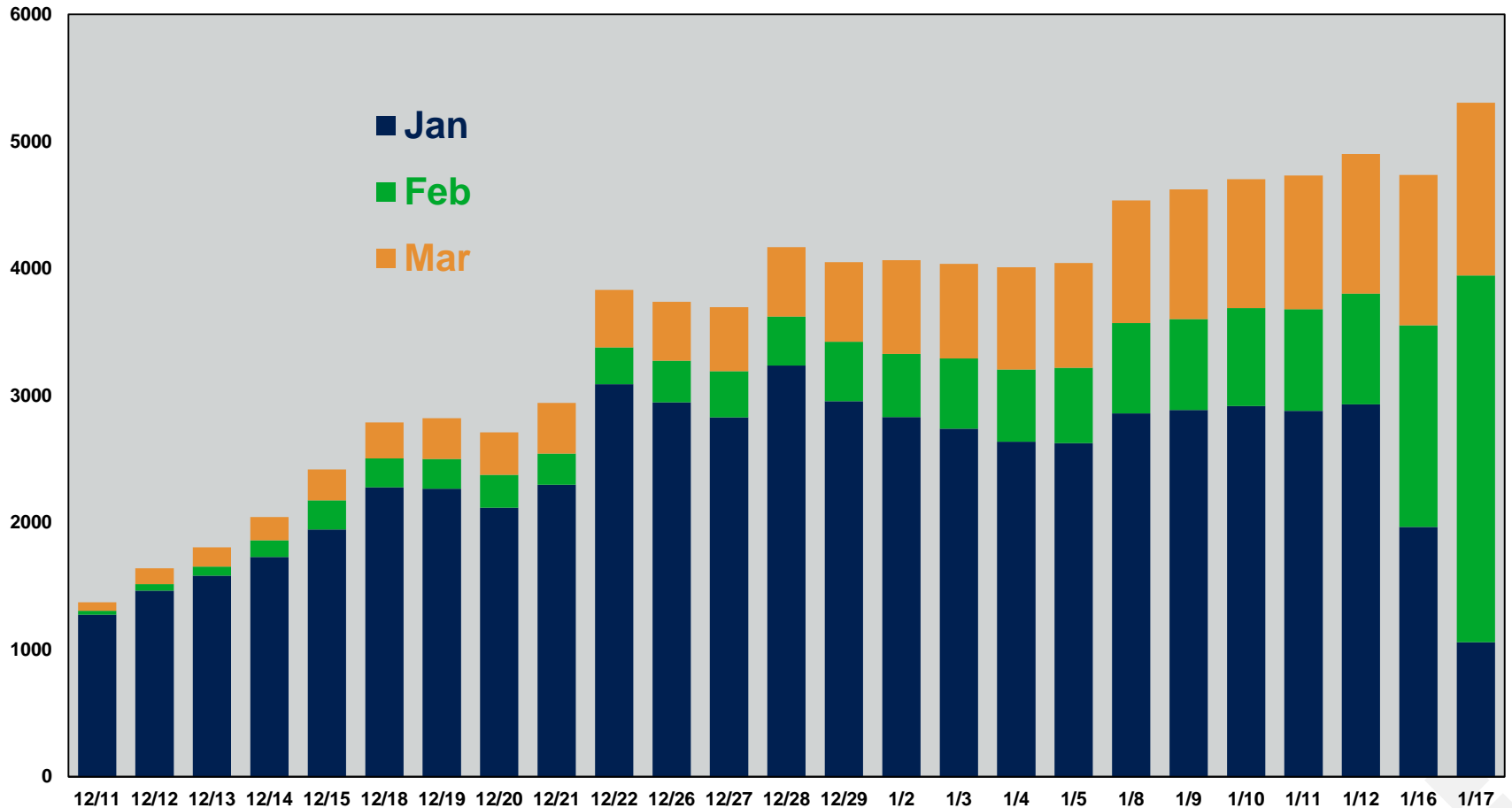


## Cboe Bitcoin Futures Daily Volume by Contract

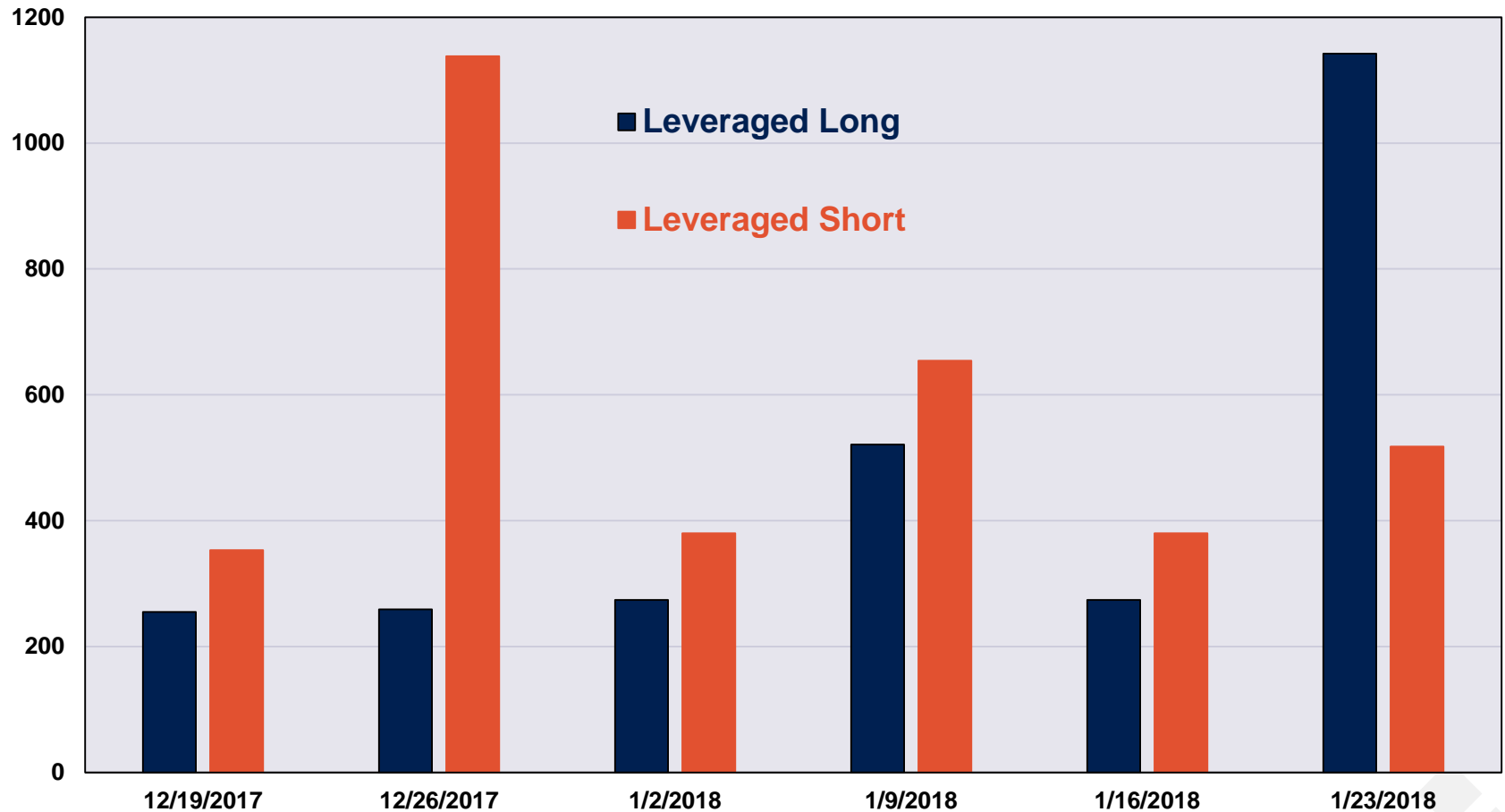


Data Source: Cboe Futures Exchange

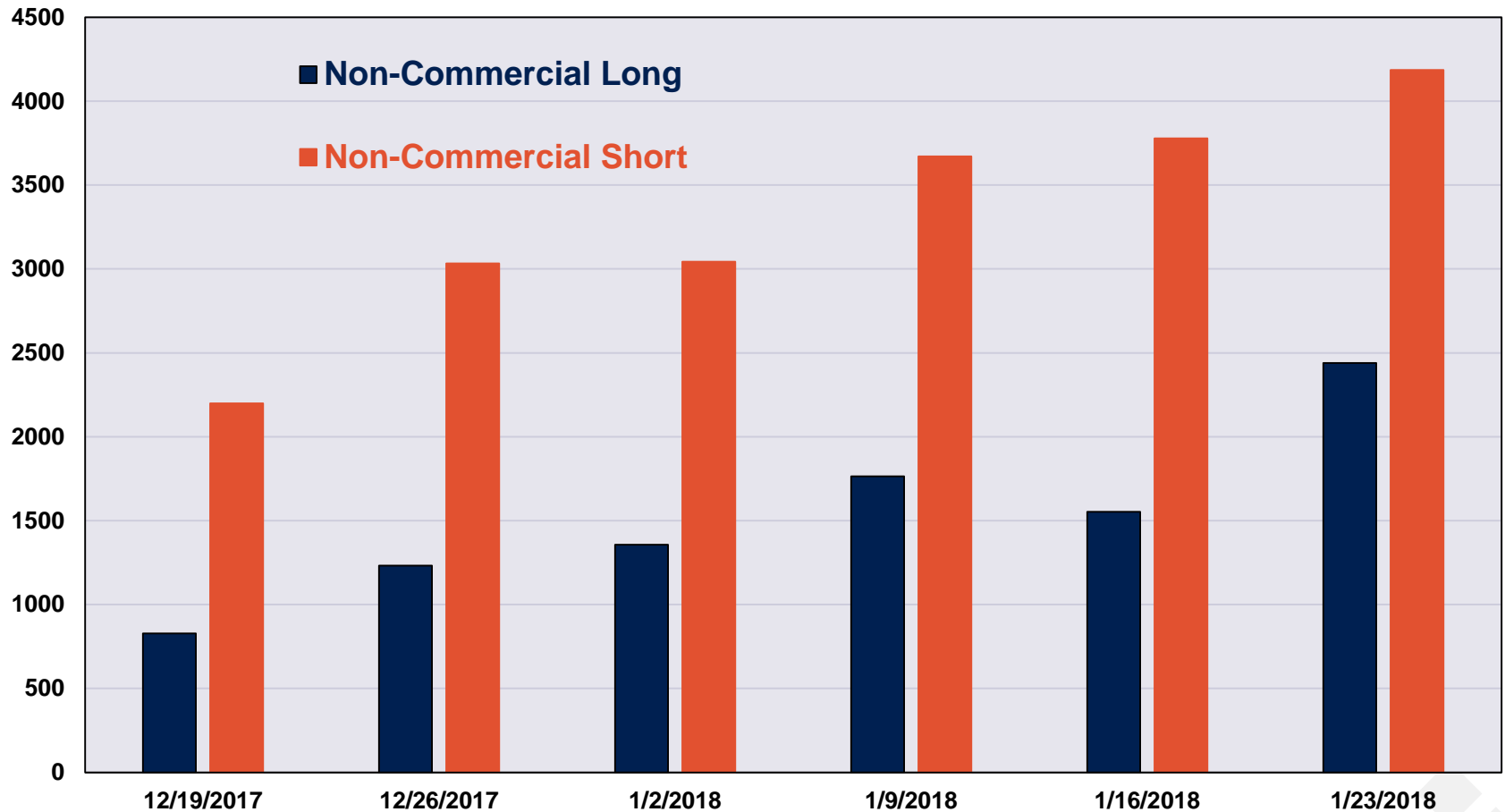
## Cboe Bitcoin Futures Daily Open Interest by Contract



## Cboe Bitcoin Futures - COT Report Leveraged Money Long / Short



## Cboe Bitcoin Futures - COT Report Non-Commercial Long / Short





## Spot Offer versus January Bid Prices – 10:00 am Chicago Time

<b>Date</b>	<b>Spot Offer</b>	<b>Jan Bid</b>	<b>Dollar Premium</b>	<b>Premium / 2 x Spot</b>
18-Dec	18557	18810	253	0.68%
19-Dec	18307	18730	423	1.14%
20-Dec	16343	16750	407	1.23%



## Spot Offer versus February Bid Prices – 10:00 am Chicago Time

<b>Date</b>	<b>Spot Offer</b>	<b>Feb Bid</b>	<b>Dollar Premium</b>	<b>Premium / 2 x Spot</b>
18-Dec	18557	18940	383	1.02%
19-Dec	18307	18780	473	1.28%
20-Dec	16343	16830	487	1.47%



## Spot Offer versus March Bid Prices – 10:00 am Chicago Time

<b>Date</b>	<b>Spot Offer</b>	<b>Mar Bid</b>	<b>Dollar Premium</b>	<b>Premium / 2 x Spot</b>
18-Dec	18557	19140	583	1.55%
19-Dec	18307	18890	583	1.57%
20-Dec	16343	16980	637	1.91%



- ❖ We are about a month into XBT Bitcoin futures trading – volume and open interest continue to improve
- ❖ The futures pricing has been in both contango and backwardation depending on market conditions
- ❖ The futures contracts may be traded against spot (on two different venues) or versus each other as calendar spreads
- ❖ The first settlement was the afternoon of January 17<sup>th</sup>



Cboe Bitcoin Page  
(Free 'How to Trade Bitcoin Futures')

[www.cboe.com/bitcoin](http://www.cboe.com/bitcoin)

Cboe Futures Exchange

[www.cfe.cboe.com](http://www.cfe.cboe.com)

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