



Cryptocurrency: A 21st Century Asset Class

January 18, 2018

Overview of Today's Presentation

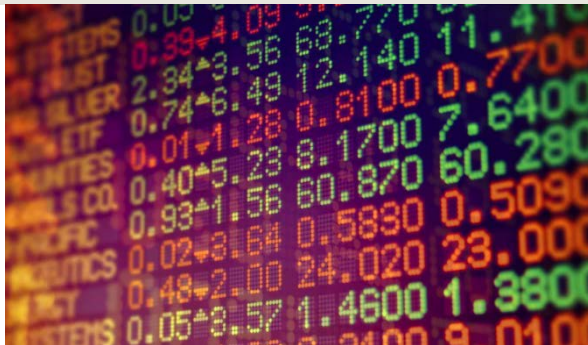
- Introduction
- Crypto 101
- Crypto Derivatives
- Developments in Product Development



Introduction:

Who We Are and What We Do

Investment Management & Derivatives



Our Investment Management practice attorneys represent participants in all aspects of the dynamic investment management industry

- Represent **entire spectrum** of investment fund and adviser clients in regulatory and transactional matters
- **Fund formation** and **product development** practice for registered funds, private funds, private equity, and venture capital funds
- We have **specialized expertise** in transactions (derivatives, repo, sec lending) and M&A
- Today, over **25 lawyers and paraprofessionals with experience advising clients** on all aspects of investment management

Blockchain Technology & Digital Currency



We represent clients, ranging from startups to leading financial institutions and Fortune 500 companies who are pioneering new blockchain solutions.

- Representing blockchain companies **since 2011**, beginning with the first wave of digital currency companies and trade associations
- **First law firm** to launch an industry practice group focused specifically on **blockchain**. Natural outgrowth of our long history representing fintech, Internet, mobile and technology companies
- Today, over **40 lawyers with experience advising companies** on all aspects of **blockchain** and **digital currency law**
- The Perkins **multidisciplinary** blockchain practice is on the front lines, helping **major players** address complex issues

Blogs of Interest

- **Asset Management ADVocate**
 - <https://www.assetmanagementadvocate.com/>
- **Derivatives and Repo Report**
 - <https://www.derivativesandreporeport.com/>
- **The Fintech Report**
 - <https://www.fintechlegalreport.com/>
- **Virtual Currency Report**
 - <https://www.virtualcurrencyreport.com/>

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Crypto 101

Cryptocurrencies: The Essentials

- What is a cryptocurrency and what is a “blockchain”?
- How many are there and where do they come from?
- How do I buy and sell them? Who has “custody” over them?
- What is “smart contract” technology?

Terminology & Definitions

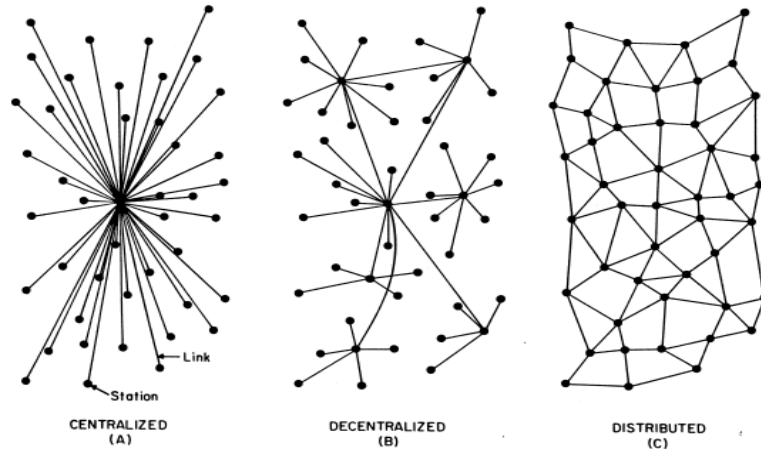
- **DLT/Blockchain vs. Cryptocurrency vs. Digital Token**
- **New Ledger Technology** – *track ownership of ANY asset*
- **New Distributed Operating System Technology** – *unstoppable applications*
- **Distributed Ledger Technology (“DLT”):**

Computer software that is distributed, runs on peer-to-peer networks, and offers a transparent, verifiable, permanent transaction management system maintained through a consensus mechanism rather than by a trusted third-party intermediary, and that guarantees execution



Distributed Ledgers

A *DISTRIBUTED LEDGER* has no central authority and every node is responsible for maintaining the ledger



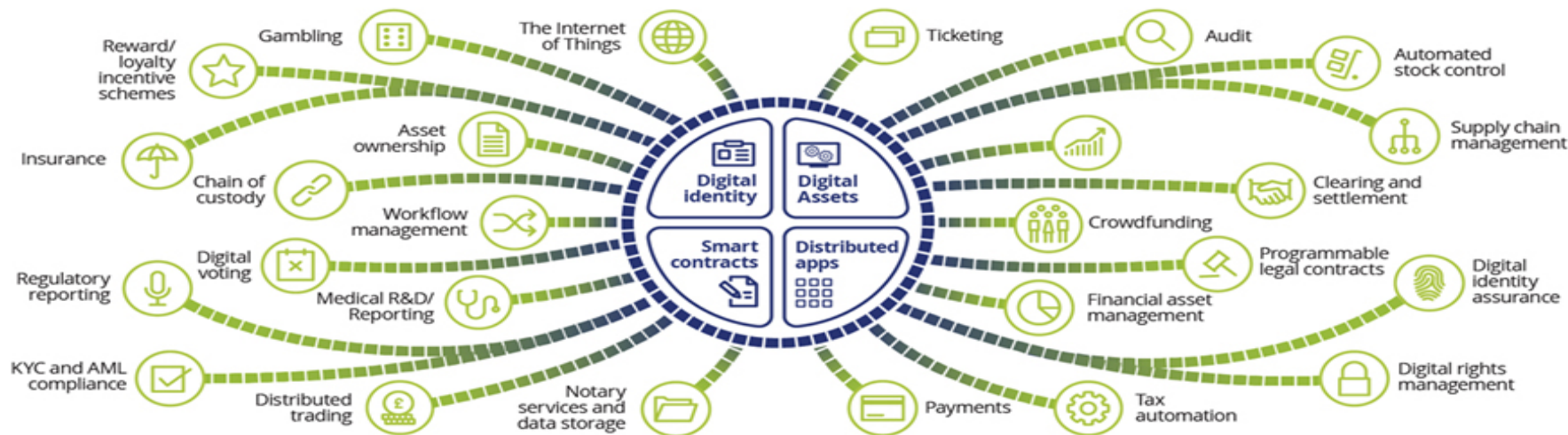
Blockchain Basics: It Began with Bitcoin

- Blockchain is a *PROTOCOL* that establishes the manner in which a ledger operates
- Bitcoin is one of many possible *APPLICATIONS* that runs on a blockchain protocol
- Enter Laurie Rosini's You Tube Video
 - <https://www.youtube.com/watch?v=6AbqrkOShkQ>

Blockchain is a New Platform Technology Like the Internet

What can you do with a blockchain?

KYC – Know Your Customer
AML – Anti-Money Laundering



Deloitte.

www.deloitte.co.uk/blockchain

<https://www2.deloitte.com/uk/en/pages/innovation/solutions/deloitte-blockchain-practice.html>

Types of Digital Currencies



How do you get Bitcoin? Other currencies?



- Purchase on an exchange
- Accept it for products or services
- Mine it

How do you store Bitcoin?



Smart Contract Technology (“SCT”), Not Just “A” Smart Contract

- Computer protocol (essentially, an algorithm)
 - Able to self-execute, self-enforce, self-verify and self-constrain the performance of its instructions
- Programmed to be event-driven
 - With state
 - Runs on a replicated, shared ledger
 - Can take custody over assets on that ledger.



Crypto Derivatives

Crypto Derivatives: The Essentials

- What types of derivatives are available through regulated exchanges?
- Are these contracts widely traded?
- What is a decentralized derivatives exchange?

TeraExchange Non-Deliverable Forward

- **Cash settlement**
 - Based on USD equivalent price of Bitcoin on TeraBit Index
- **TeraBit Index**
 - 9 underlying exchanges at present, minimum of 6
- **Master Confirmation Agreement**
 - Both parties must be ECPs
 - Based on 1998 FX and Currency Option Definitions
 - 25% Independent Amount
 - \$10,000 Minimum Transfer Amount

Source: <https://www.teraexchange.com/style/images/rnd/instr/Tera%2040.2%20Filing%20-%202014-25%20Listing%20of%20USD-Bitcoin%20Non-Deliverable%20Forward.pdf>

LedgerX

- **Physically settled**
 - Options (weekly and monthly)
 - Day-ahead swaps
- **Fully-collateralized**
 - Deposit maximum amount of Bitcoin that must be delivered or cash payment
- **Cleared through LedgerX, LLC**
 - Both parties must be ECPs

Source: <https://ledgerx.com/compliance/>

Nadex Bitcoin Spread

- **Cash settlement**
 - Based on USD equivalent price of Bitcoin on TeraBit Index
- **Weekly Spread Contract**
 - Floor limits losses & Ceiling limits gains
 - \$2 per contract
 - 50 contract limit
- **Exchange-Traded Contract**
 - Cleared through NADEX, as well

Source: <https://www.nadex.com/markets/cryptocurrency/bitcoin>

CME Bitcoin Futures Contract

- **Cash Settlement – Contract is for 5 Bitcoin**
 - Daily based on VWAP between 2:59 and 3:00 pm Central; Final based on CME CF Bitcoin Reference Rate at 4:00 pm London
- **CME CF Bitcoin Reference Rate**
 - Weighted average calculated every 5 minutes
 - Bitstamp, GDAX, itBit, Kraken
- **Risk Management**
 - Initial margin of at least 43%
 - Price limits result in trading halts

Source: http://www.cmegroup.com/trading/equity-index/us-index/bitcoin_contract_specifications.html

CBOE Bitcoin Futures Contract

- **Cash Settlement – Contract is for 1 Bitcoin**
 - Based on Gemini Exchange Auction Price
- **Risk Management**
 - Initial margin of at least 44%
 - Trading halts

Source: <http://cfe.cboe.com/cfe-products/xbt-cboe-bitcoin-futures>

Cantor Exchange Bitcoin Swap Contract

- Binary option
 - Maximum tenor is 90 days; \$.01 tick size
 - Margin of 100% at-risk
- Cash-settled with payout determined by comparison of strike w/ CX Reference Price (RP)
 - RP determined in last 10 minutes of Last Trading Day; sources not disclosed
- Position accountability \$10k net short or long

Source: <http://regulatory.cantorexchange.com/PDFs/NTPs/CX-Bitcoin-Contract---40-2-Submission.aspx>

CBOE Bitcoin Futures – Some Numbers

- Based upon January 9th TFF Reports
- Open interest is 4,624 Contracts
 - Increase of 559 contracts from previous week
- 42 Traders
 - Increase of 3 traders from previous week
 - No mutual funds; only hedge funds

Source: <http://www.cftc.gov/MarketReports/CommitmentsofTraders/index.htm>

CBOE Bitcoin Futures – Number of Contracts

Type of Trader	Long	Short	Spreading
Dealer Intermediary	39	0	15
Asset Manager/ Institutional	0	0	0
Leveraged Funds	521	654	253
Other Reportables	1204	3017	41
Non Reportables	2551	644	n/a

Source: http://www.cftc.gov/dea/options/financial_lof.htm

Decentralized Derivatives Exchange

- **Smart contract based**
 - No intermediary, such as an exchange
 - “Relayer technology” allows for order books to run “automatically”
- **Peer-to-peer trading of crypto derivatives**
 - Both parties would need to be ECPs, if US law applies

Source: <https://dydx.exchange/>



Developments in Product Development

Product Development: The Essentials

- What are the primary characteristics of exchange traded funds (“ETFs”) that invest in Bitcoins and Bitcoin futures?
- What is the Bitcoin Investment Trust?
- Are there private funds that invest Bitcoin and crypto?

Bitcoin Futures ETFs

- **Bitcoin Futures (Long) ETFs**
 - REX Bitcoin Strategy ETF
 - VanEck Vectors Bitcoin Strategy ETF
- **Common Core Features**
 - Seek to provide investors with long exposure to the price movements of Bitcoin
 - Invest (up to 25% of assets) through a Cayman subsidiary that itself is investing in Bitcoin long futures
 - Invest directly in Bitcoin derivatives, other investment vehicles that provide exposure to Bitcoin (e.g., other ETFs or ETFs), or cash

All ETFs listed here are filed on Form N-1A.

Bitcoin Futures ETFs

- **Bitcoin Futures (Long) ETFs**
 - First Trust Bitcoin Strategy ETF
 - First Trust Bitcoin Plus Strategy ETF
- **Common Core Features**
 - Seek to provide investors with long exposure to the price movements of Bitcoin
 - Invest in Bitcoin futures, exchange-traded options on Bitcoin Futures, options and swaps linked to Bitcoin, and Bitcoin ETFs
 - Invest remainder in cash, U.S. government securities with maturities of 5 years or less, and/or money market instruments

All ETFs listed here are filed on Form N-1A.

Bitcoin Futures ETFs

- **Bitcoin Futures (Long) ETF**
 - ProShares Bitcoin ETF
- **Core Features**
 - Seek to provide investors with long exposure to the price movements of Bitcoin
 - Invest “substantially all” of its assets in Bitcoin long futures contracts

The ETF listed here is filed on Form S-1.

Bitcoin Futures ETFs

- **Bitcoin Futures (Short) ETF**
 - REX Short Bitcoin Strategy ETF
- **Core Features**
 - Seek to provide investors with short exposure to the price movements of Bitcoin
 - Invest (up to 25% of assets) through a Cayman subsidiary that itself is investing in Bitcoin short futures
 - Invest directly in Bitcoin derivatives, other investment vehicles that provide exposure to Bitcoin (e.g., other ETFs or ETFs), or cash

The ETF listed here is filed on Form N-1A.

Bitcoin Futures ETFs

- **Bitcoin Futures (Short) ETFs**
 - First Trust Inverse Bitcoin Strategy ETF
 - First Trust Inverse Bitcoin Plus Strategy ETF
- **Common Core Features**
 - Seek to provide investors with long exposure to the price movements of Bitcoin
 - Invest in Bitcoin futures, exchange-traded options on Bitcoin Futures, options and swaps linked to Bitcoin, and Bitcoin ETFs
 - Invest remainder in cash, U.S. government securities with maturities of 5 years or less, and/or money market instruments

All ETFs listed here are filed on Form N-1A.

Bitcoin Futures ETFs

- **Bitcoin Futures (Short) ETF**
 - ProShares Short Bitcoin ETF
- **Core Features**
 - Seek to provide investors with short exposure to the price movements of Bitcoin
 - Invest “substantially all” of its assets in Bitcoin short futures contracts
 - Invest using leverage

The ETF listed here is filed on Form S-1.

Bitcoin ETFs

- **Bitcoin ETF**
 - Winklevoss Bitcoin Trust (COIN)
- **Core Features**
 - Invest directly and only in Bitcoin
- **Rejected by the SEC on March 10, 2017**
 - The markets for Bitcoin are unregulated
 - BATZ Exchange would not be able to enter into surveillance-sharing agreements with Bitcoin markets

The ETF listed here is filed on Form S-1.

Bitcoin Over-the-Counter Funds

- **Bitcoin Over-the-Counter (OTC) Fund**
 - Bitcoin Investment Trust (GBTC)
- **Core Features**
 - Holds Bitcoin directly
 - Similar to an ETF, issues creation baskets in exchange for deposits of Bitcoin and distributes Bitcoin in connection with redemption baskets
 - Calculates a NAV daily based on the Bitcoin market price
- **OTC Marketplace**
 - GBTC trades on OTCQX
 - On OTCQX, investors may buy and sell securities through an institutional, online or retail broker-dealer

The OTC had filed a Form S-1 with the SEC (01/20/2017) but withdrew its filing on (10/25/2017). It originally had filed under Form D (Rule 506(c)). It is not regulated as an investment company under the Investment Company Act of 1940.

Crypto Hedge Funds

- Structurally, same as other private funds
- Asset class is still developing
 - At present, “long only” funds more prevalent since difficult to short
- Next generation strategies
 - Arbitrage strategies, quant trading, use of artificial intelligence
 - “Macro crypto”