Katten

Katten Muchin Rosenman LLP

Beyond Bitcoin

FIA Law & Compliance Division

May 17, 2018

Katten Muchin Rosenman LLP

Henry Bregstein
Gary DeWaal
Kevin M. Foley
Christian T. Kemnitz
Ayah K. Sultan
Allison C. Yacker

Types of Cryptocurrencies

- There are three principal types of cryptocurrencies; they each serve different functions. Although all are termed cryptocurrencies, they all are solely entries on a decentralized distributed ledger.
  - Some serve principally as a medium of exchange and store of value, like Bitcoin; they operate as a virtual currency.
  - Some reflect an interest in an enterprise and are likely securities, like DAO and REcoin. They might be initially issued as part of initial coin offerings (ICOs); they may be associated with pre-sales (SAFTs). They are often referred to as digital tokens.
  - Others are structured as utility tokens, giving preferential rights to use the output of a new project. These also may be deemed securities.
- Cryptocurrencies may morph from one function to another during their lives, like security futures (e.g., similar to how a broad-based stock index futures contract may become a narrow-based stock index futures contract). They may have multiple purposes throughout.

Katten
Katten Muchin Rosenman LLP

CFTC Regulation of Cryptocurrencies

- Virtual currencies are a commodity.
  - Commodities are generally defined as any goods, articles, services, rights and interests “in which contracts for future delivery are presently or in the future dealt in.”
  - The CFTC first found that Bitcoin and other virtual currencies were properly defined as commodities in 2015, when it filed and settled charges against Coinflip, Inc. and Francisco Riordan for operating a trading facility for Bitcoin options without it being registered as a SEF or a DCM.
- Sale to retail clients:
  - If financing is involved, actual delivery must be within 28 days, or must be registered as an FCM. Futures transactions must be executed on or subject to the rules of a DCM.
- Sale of options on virtual currencies:
  - Defined as swaps.
  - All trading facilities for commodity options on cryptocurrencies must be registered with the CFTC as an SEF or a DCM.

Katten
Katten Muchin Rosenman LLP

CFTC Regulation of Cryptocurrencies

- Additionally, new anti-manipulation authority of the CFTC adopted as part of Dodd-Frank prohibits the use of any manipulative device or contrivance in connection with transactions involving commodities in interstate commerce.
  - The ancillary CFTC rule adopted under Dodd-Frank prohibits the intentional or reckless employment or attempt to employ any manipulative device, scheme or artifice to defraud, to make any untrue or misleading statement of a material fact or to omit a material fact.
    - **Breaking News:** On May 1, a California federal court judge issued a final order confirming the dismissal of the enforcement action by the CFTC against Monex Deposit Company and other defendants. The judge provided that the CFTC can only use the prohibition against persons engaging in any manipulative or deceptive device or contrivance in connection with the sale of any commodity in interstate commerce enacted as part of Dodd-Frank to prosecute acts of purported fraud in instances of fraud-based market manipulation.
- Traditional CFTC anti-manipulation authority is also relevant.

Katten
Katten Muchin Rosenman LLP

Litigation – CFTC

- In June 2016, BFXNA Inc., doing business as Bitfinex, which operated an online platform for trading cryptocurrencies, agreed to settle charges brought by the CFTC that it allegedly engaged in prohibited, off-exchange commodity transactions with retail clients and failed to register as an FCM, as required.
- Relying on its broad anti-manipulation authority enacted as part of Dodd-Frank, the CFTC recently filed an enforcement action against Gelfman Blueprint, Inc., and Nicholas Gelfman, its CEO and head trader, for purportedly running a Ponzi scheme related to Bitcoin. These allegations related to Bitcoin alone, and not to derivatives on Bitcoin. The defendant's answer argues that the CFTC is not authorized to seek relief as virtual currencies are not commodities.
- On March 6, a federal court in New York affirmed that the CFTC has the authority to bring an enforcement action against a person that has engaged in fraud involving a virtual currency, even if the transaction does not involve a futures contract or other derivatives contract. The enforcement action was against CabbageTech, Corp. and Patrick McDonnell, its owner and controller, for unlawfully soliciting customers to send money and virtual currencies for virtual currency trading advice and for the discretionary trading of virtual currencies by Mr. McDonnell. The CFTC alleged that the defendants did not provide the promised services and misappropriated their customers' funds.

Katten
Katten Muchin Rosenman LLP

How are Security Tokens Regulated in the US?

- Security tokens are subject to federal and state securities regulation:
  - A new security must either be registered with the SEC (and potentially states) or meet an exemption.
- Offers and exchanges:
  - Exchanges for digital tokens that are securities must be registered as a national securities exchange or be exempt from such registration requirement (e.g., broker-dealers operating alternative trading systems).
  - Under SEC and state law, participants should be aware of potential broker-dealer registration requirements.
- Advice:
  - Participants in the business of giving advice about securities to clients are investment advisers and may be required to register with the SEC.
  - An investment company is a vehicle that issues securities and is predominantly involved in the business of investing in securities. Under the Investment Company Act, investment companies must register with the SEC or qualify for an exemption from registration.

Katten
Katten Muchin Rosenman LLP

ICOs

- The DAO (2016)
  - The first token crowdsale in mid-2016. Raised $152m in a matter of weeks. Tokens included voting rights to select collective investment projects**.** Shut down after a hacker/bad actor directed majority of funds to a single project.
- Tezos (2017)
  - Raised approximately $232m for “self-amending” better blockchain. Founders currently in dispute with the Swiss foundation established to administer ICO proceeds.
- Filecoin (2017)
  - Raised approximately $250m for a decentralized file storage network.
- Telegram (2018)
  - A messaging service that raised $1.7 billion in two funding rounds. A Russian court officially banned the messaging app weeks after its presale concluded.
- Dragon (2018)
  - Raised approximately $320m. DRG tokens are exchanged for DGC (Dragon Global Chips), a cryptocurrency gaming chip at Casinos allowing both players and Casinos to take advantage of the added transparency & security of the Blockchain.

Katten
Katten Muchin Rosenman LLP

ICOs

- Tokendata, an ICO tracker, lists 902 crowdsales which took place in 2017.
  - Of these, 142 failed at the funding stage and a further 276 have since failed.
  - This means that 46% of last year's ICOs have already failed.
- According to one academic study, there have been over 1,600 known ICOs.

Katten
Katten Muchin Rosenman LLP

Tokenized Traditional Securities

- In addition to initial coin offerings, there are opportunities for companies to offer digital versions of traditional securities (e.g., tZERO).
- Delaware enacted new provisions authorizing corporations to maintain certain required records, including stock ledgers, on electronic networks or databases, including distributed electronic networks.
- Arizona became the second state to allow corporations to maintain data on a blockchain.

Katten
Katten Muchin Rosenman LLP

SEC Regulation

- On July 25, the SEC Report of Investigation regarding DAO found that digital tokens issued by an entity for the purpose of raising funds for projects may be considered securities under federal law.
- The SEC based its conclusion that DAO tokens were securities on the four-part test articulated in *SEC v. W.J. Howey*.
  - The elements of an investment contract are an (1) investment of money (2) in a common enterprise (3) with a reasonable expectation of profits (4) to be derived solely from the entrepreneurial or managerial efforts of others.
- The SEC additionally raised the possibility that a virtual organization might be required to register as an investment company and a securities exchange.

Katten
Katten Muchin Rosenman LLP

Litigation – SEC

- On December 11, 2017, Munchee Inc., a company offering digital tokens to raise capital for its blockchain-based food review service halted its ICO after the SEC found that Munchee's conduct constituted unregistered securities offers and sales. The Munchee order made it clear that a cryptocurrency will be deemed a security if its holders purchase the token with the expectation that it will rise in value principally based on the managerial efforts of others.
- The SEC recently brought a lawsuit in a federal court in Texas against AriseBank, Jared Rice, the CEO and co-founder of AriseBank and Stanley Ford, the other co-founder of AriseBank and obtained a court order halting an allegedly fraudulent initial coin offering.
  - According to the SEC, AriseBank claimed to be the world's first decentralized bank offering numerous consumer banking products and access to over 700 virtual currencies.
  - The SEC charged that, among other things, AriseBank's ICO constituted the unlawful offer of securities without registration or a qualified exemption.

Katten
Katten Muchin Rosenman LLP

Enforcement – SEC

- Although the SEC has declined to comment, there have been reports of a large number of subpoenas and information requests sent regarding the structure of pre-sales and sales of ICOs.
- There have been reports that the SEC is preparing to examine as many as 100 hedge funds focused on cryptocurrencies starting in the next few months.

Katten
Katten Muchin Rosenman LLP

Litigation – Private Actions

- Private lawsuits in this space have been filed.
  - At least four purported class actions have been filed against the founders of Tezos alleging securities fraud in the case of the Tezos ICO, among other offenses.
  - At least one purported class action has been filed against Giga Watt.
  - A purported class action was filed in a California court against Ripple Labs, Inc. and other defendants for offering and selling unlicensed securities. The named plaintiff seeks rescission and punitive damages against all the defendants.

Katten
Katten Muchin Rosenman LLP

Practical Questions to Ask: Is a Digital Token Likely a Cryptocurrency or Security?

1. What was the initial stated purpose for the digital token?
2. How is the digital token promoted today?
3. Is the digital token generally regarded as a currency, currency substitute or payment substitute, serving as a medium of exchange, store of value or unit of account?
4. Do merchants or any third parties accept the digital token for payment? If yes, how widespread? Is the digital token used for payment on a blockchain? If yes, how?
5. Was the digital token initially issued as part of an ICO or a type of continuous offering? If not, how are new digital tokens currently issued and what is the percentage of ICO and non-ICO derived digital tokens? Was there a pre-sale associated with the ICO (e.g., SAFT)?
6. What is the governance regarding the blockchain associated with the digital token? Is there a different governance for the token itself? If yes, what is it?
7. Is the blockchain associated with the digital token centralized or decentralized?
8. How are transactions involving the digital token validated and recorded on the associated blockchain?
9. Do holders of digital tokens directly or indirectly have any rights to income? Are there any other rights associated with ownership of the digital token? If yes, what are they?

Katten
Katten Muchin Rosenman LLP

Proof of Work v. Proof of Stake

- Under a Proof of Work system, miners compete to verify that transactions are legitimate. To do this, they must solve mathematical formulas that verify the integrity of the transacted coins. The first miner to solve these formulas receives an amount of the transacted currency, also known as a block reward. Once the problem is solved, the transactions create a block, which is stored as a public ledger on the blockchain.
- Proof of Stake is a different way of verifying and validating transactions. A validator (the equivalent of a “miner” in a Proof of Work system) is chosen by the stake (i.e., amount of coins) a validator has and the respective age of the stake.

Bitcoin

1. Initial purpose	Bitcoin was created to be a virtual currency and thus, an alternative to fiat currency.
2. How promoted?	Bitcoin is promoted as a means of payment.
3. Regarded as currency?	Bitcoin is considered a virtual currency and a store of value.
4. Accepted for payment?	Many merchants accept Bitcoin for payment, including major retailers such as Overstock.com and Expedia. Additionally, Bitcoin miners are paid through a combination of bitcoin's block reward and transaction fees.
5. Issued in ICO?	Bitcoin was not issued as part of an ICO. Bitcoins are created by a competitive and decentralized process called "mining."
6. Governance?	Developed in 2009 by an unknown programmer or group of programmers named Satoshi Nakamoto. Uses proof-of-work as a consensus mechanism. Bitcoin is open-source, meaning individuals (i.e., miners) can modify the protocol because it is publicly accessible.
7. Centralized or decentralized?	Decentralized.
8. How are transactions recorded?	Transaction data is recorded sequentially and grouped into transaction "blocks." The record is known as the "blockchain" and is considered permanent (uneditable/tamper-proof).
9. Rights to income?	No.

Ether

1. Initial purpose	Ether's initial purpose was to be the "main internal crypto-fuel of Ethereum" and "used to pay transaction fees."
2. How promoted?	Ether is promoted as the payment mechanism for transactions on the Ethereum blockchain requiring "gas."
3. Regarded as currency?	Although Ether may have been a security at the time of issuance, it is now generally regarded as a virtual currency.
4. Accepted for payment?	Ether is used in some real-world transactions. Overstock, AlphaBay and PureVPN are examples of merchants that accept payments in Ether.
5. Issued in ICO?	Yes, 60 million Ether tokens were issued as part of the ether ICO in July 2014, and earlier buyers benefitted from larger discounts. However, today Ether tokens are exclusively created through mining.
6. Governance?	Uses proof-of-work, meaning that miners keep the blockchain consistent, complete, and unalterable in exchange for a reward of Ether. Ethereum is open-source, meaning that individuals (i.e., miners) can modify the protocol because it is publicly accessible. However, there is a question as to whether the potential appreciation in value of Ethereum is derived from the entrepreneurial or managerial efforts of the Ethereum Foundation, an organization to promote and support Ethereum platform.
7. Centralized or decentralized?	Decentralized.
8. How are transactions recorded?	Transactions are recorded similarly to the way Bitcoin transactions are recorded, with one difference being that Ethereum's nodes store the most recent state of each smart contract, in addition to all ether transactions.
9. Rights to income?	No.

Katten
Katten Muchin Rosenman LLP

Ripple

1. Initial purpose	Ripple was designed and is used as a payment vehicle.
2. How promoted?	Ripple represents itself as a “digital asset for payments.”
3. Regarded as currency?	Ripple is generally regarded as a virtual currency.
4. Accepted for payment?	Yes, although not as widespread as Bitcoin or Ether. CoinHost, Torguard, The Bitcoin Store, and PexPeppers are some of the merchants that accept Ripple for payment.
5. Issued in ICO?	Ripple was not issued as part of an ICO, although some argue that it is currently issued as a continuous ICO.
6. Governance?	Ripple is not proof-of-work as transactions are verified by consensus among network members, rather than by mining.
7. Centralized or decentralized?	The Ripple distributed ledger is likely decentralized. While Ripple was previously criticized for having too few validators to approve transactions, the amount of "validator nodes" was increased to 55 last year.
8. How are transactions recorded?	The Ripple ledger uses a consensus algorithm known as the “Ripple Protocol” to determine if a transaction is legitimate. This involves the following steps: (i) each transaction is submitted to the next candidate ledger; (ii) each network node evaluates proposals from “N” peers: a high number chosen based on low probability of collusion; (iii) consensus among nodes is reached with super-majority of peers; (iv) finally, the network recognizes the new validated ledger.
9. Rights to income?	No.

FinCEN Regulation

- FinCEN oversees the application of the Bank Secrecy Act and USA PATRIOT Act to companies.
- A person who provides money transmission services or any other person engaged in the transfer of funds must be registered as a money services business.
- FinCEN has issued rulings suggesting that virtual currency payment systems and virtual currency exchange platforms are money transmitters.
- However, “users” (people who obtain virtual currency to purchase goods or services, including miners) and bona fide investment companies engaged in investing in virtual currencies for their own accounts are not money transmitters.
- On March 6, the US Treasury Department publicly released a letter stating that developers or exchanges that exchange ICO issued coins or tokens for fiat or virtual currency would typically be required to be licensed as money service business by FinCEN unless otherwise registered with the SEC or CFTC.

Katten
Katten Muchin Rosenman LLP

OFAC

- OFAC updated its FAQs to include that persons subject to its jurisdiction are prohibited from doing business with persons named on the Specially Designated Nationals (SDN) and Blocked Persons list, whether utilizing fiat or virtual currency.
- OFAC indicated that it may add digital currency addresses to its SDN list to alert the public of specific digital currency identifiers associated with blocked persons.
- Persons that identify digital currency identifiers or addresses associated with prohibited persons should take the steps to block the relevant digital currency and file a report with OFAC.
- On May 3, NFA issued a notice reminding FCMs and introducing brokers to comply with the recent OFAC guidance for virtual currency transactions.

Katten
Katten Muchin Rosenman LLP

State Regulation

- Most states regard transactions in virtual currencies as part of a business as being subject to money transmitter requirements.
- In New York, such transactions are also subject to NY BitLicense requirements, and in other states, possibly soon, requirements under the Uniform Regulation of Virtual Currency Businesses Act as may be adopted.

Katten
Katten Muchin Rosenman LLP

NYDFS Regulation

- NYDFS has implemented BitLicense regulations with respect to Bitcoin and other virtual currencies.
- These regulations require the licensing of, and establish minimum standards of conduct for, any person who engages in virtual currency business activity involving New York or a New York resident.
- Virtual currency business activity includes:
  - Receiving virtual currency for transmission or transmitting it.
  - Storing, holding or maintaining control of virtual currency on behalf of others.
  - Buying and selling virtual currency as a customer business.
  - Controlling, administering or issuing a virtual currency.

Katten
Katten Muchin Rosenman LLP

NYDFS Regulation

- Any person engaged in the business of receiving money for transmission or transmitting the same must be licensed as a money transmitter.
- This likely includes, but is not limited to, e-wallets, exchanges, payment processors, dealers, virtual currency ATMs and administrators.
- On February 7, NYDFS issued guidance reminding virtual currency entities licensed in New York State that they are required to implement policies to detect, prevent, and respond to fraud, attempted fraud, and similar wrongdoing, including market manipulation.

Katten
Katten Muchin Rosenman LLP

State Enforcement and Litigation

- Many states have brought enforcement actions against persons and firms for the unregistered offer and sale of securities in connection with ICOs.
- North Carolina issued a cease and desist order against BitConnect, a UK-based cryptocurrency-issuing company, in connection with various digital currency-related investment programs.
  - The Securities Division of the NC Department of the Secretary of State claimed that BitConnect was selling unregistered securities while not being registered as a dealer or salesman of securities in the state and omitting material facts when offering investments.
- North Carolina also entered a temporary cease and desist order precluding Power Mining Pool from selling its securities to North Carolina residents. According to the Securities Division, Power Mining Pool claimed to be a mining pool that mined seven cryptocurrencies and automatically switched operations to the most profitable cryptocurrency to transact in at the time.

Katten
Katten Muchin Rosenman LLP

State Enforcement and Litigation

- The Texas State Securities Board (TSSB) also entered a cease and desist order against DavorCoin, a company offering a lending program involving a new cryptocurrency. According to the TSSB, DavorCoin offered persons an opportunity to invest in its lending program and achieve certain minimum guaranteed returns, but did not provide any detail as to how it would generate such profits.
- On April 10, TSSB issued a report noting widespread fraud in many cryptocurrency offerings aimed at Texas citizens.
- Recently, Massachusetts halted five ICOs, claiming that the companies behind them were selling unregistered securities.
- On April 17, the New York Attorney General's Office launched an inquiry into 13 virtual currency exchanges as a part of an investor protection initiative, requesting disclosures regarding (1) ownership and control; (2) basic operation and fees; (3) trading policies and procedures; (4) outages and other suspensions of trading; (5) internal controls; and (6) privacy and money laundering.

Katten
Katten Muchin Rosenman LLP

Calls for Self-Regulatory Organization

- Adding an additional layer of oversight on virtual commodity cash markets, in the form of self-regulation, is important for consumer protection and to ensure the integrity of these markets.
- Gemini has proposed the Virtual Commodity Association, an industry-sponsored self-regulatory organization for the U.S. virtual currency industry.
- At the February 14 CFTC TAC meeting, Commissioner Brian Quintenz called for the consideration of whether the "SRO model could assist cryptocurrency exchanges establish and enforce standards that protect investors and deter fraud."
- Seven of the largest cryptocurrency enterprises in the United Kingdom, including Coinbase, have formed a trade organization known as CryptoUK.
- A self-regulatory organization in Japan consisting of 16 of the country's cryptocurrency exchanges has been registered with the Japanese Financial Services Agency.

Katten
Katten Muchin Rosenman LLP

International Regulation

- Foreign regulators have taken different approaches to the regulation of ICOs:
  - Canadian Securities Administrators have published guidance regarding how securities and derivatives laws in Canada might be impacted by ICOs.
  - In Switzerland, FINMA published a notice that it was investigating a number of ICOs to determine if regulatory provisions have been breached, and noted ICOs may come under existing regulatory legislation.
  - The government of Gibraltar issued a proposal for the regulation of digital token sales, secondary digital token market platforms, and investment services relating to non-security and non-virtual currency digital tokens that also expressed a narrow view of what constitutes a security token.
  - Under a proposed bill in Bermuda, ICOs will be treated as a restricted business activity that will require consent from the Minister of Finance.
  - The Securities and Futures Commission of Hong Kong issued a notice stating that digital tokens offered or sold as part of ICOs may constitute securities and be subject to HK securities laws.
  - Seven government regulators in China banned the use of initial digital coin offerings as a fundraising device. South Korea has also banned ICOs.

Katten
Katten Muchin Rosenman LLP

International Regulation

- The legal status of cryptocurrencies varies from country to country and is still changing.
  - Japan granted its first licenses for cryptocurrency exchanges.
  - Binance, a cryptocurrency exchange originally founded in China, was forced to move its offices to Japan after regulatory measures from the Chinese government; however, Japan recently suspended Binance, claiming that it was violating Japanese rules and was not properly registered.
  - A number of national governments are exploring the issuance of cryptocurrency tokens which represent fiat currency (e.g., Singapore, Kazakhstan, China, Russia, Australia, Sweden).

Katten
Katten Muchin Rosenman LLP

FCA Regulation

- In the UK, the FCA issued a warning as to ICOs being high-risk and that some may involve regulated activities and regulated financial investments (while not being regulated separately).
- Whether an ICO falls within the FCA's regulatory boundaries can only be decided on a case by case basis.
- Depending on how they are structured, some ICOs may involve regulated investments and firms involved in an ICO may be conducting regulated activities.

Katten
Katten Muchin Rosenman LLP

Access: Centralized Exchanges

- Off blockchain entities that facilitate conversions of fiat currency to cryptocurrencies, cryptocurrencies to cryptocurrencies or cryptocurrencies to fiat currencies.
- Some centralized exchanges, such as Bittrex, also allow for the trading of tokens.
- May solely offer exchanging services or order books.
- May offer custody services or provide wallet services to customers.
- Transactions on an exchange are not on the blockchain; they are on the exchanges' private ledger.
- Typically require KYC compliance and identity document submission.
- May be faced with downtime or hacking attempts.
- Examples: Binance, Bittrex, GDAX, Gemini

Katten
Katten Muchin Rosenman LLP

Centralized Exchanges: Issues

- Legal and compliance staff supporting a firms trading or facilitation of trading by third parties on a centralized exchange should consider:
  - Ownership and control
  - Basic operation and fees
  - Regulation
  - Trading policies and procedures
  - Outages and other suspensions of trading
  - Internal controls
  - Cybersecurity and business continuity
  - Privacy and money laundering

Katten
Katten Muchin Rosenman LLP

Access: Decentralized Exchanges

- A new technology that facilitates cryptocurrency trading on a distributed ledger.
- Order solicitation and preliminary coupling with a counterparty may occur off exchange.
- Does not rely on a third-party service to hold the customer's funds.
- Trades are peer-to-peer through an automated process.
- Examples: Bitsquare, 0X, EtherDelta

Katten
Katten Muchin Rosenman LLP

Access: Derivatives Regulated Exchanges

- On December 1, 2017 three exchanges regulated by the CFTC self-certified new cash-settled derivatives contracts based on Bitcoin.
  - The Chicago Mercantile Exchange and the CBOE Futures Exchange proposed to offer margined futures contracts related to the price of Bitcoin. CFE Futures began trading on December 10; CME Futures began trading December 17.
  - The Cantor Exchange will list fully collateralized binary options based on the price of the same virtual currency.
- Nadex
  - On December 18, 2017, the non-intermediated exchange began offering trading in Nadex Bitcoin Spreads.
- TeraExchange, LLC, a CFTC-regulated SEF, began trading non-deliverable Bitcoin forward contracts based on the Tera Bitcoin Price Index in 2014.
- LedgerX was approved in July 2017 as a SEF and DCO for fully collateralized digital currency swaps.

Katten
Katten Muchin Rosenman LLP

Access: National Securities Exchanges and ATSs

- On March 7, the SEC stated that entities aiming to operate as an ATS are subject to regulatory requirements and should register with the SEC as a broker-dealer and become a member of an SRO.
- ATS examples:
  - Liquid M Capital LLC / Templum
  - Coinbase has reportedly entered into discussions with the SEC about becoming an ATS.
- There are no national securities exchanges that trade digital tokens.

Katten
Katten Muchin Rosenman LLP

Smart Contracts

- Smart contracts are self-executing contracts with the terms of the agreement between buyer and seller being directly written into lines of code which exist on a blockchain.
- Smart contracts have potential beyond the simple transfer of assets, being able to execute transactions in a wide range of fields, including insurance premiums and crowdfunding agreements.
- Blockchain-based applications might also incorporate smart contract code to carry out and automate their operations (e.g., ISDA Common Domain Model Project).

Katten
Katten Muchin Rosenman LLP

Smart Contracts

- Blockchains such as Ethereum, Neo and Tezos allow developers to program their own smart contracts.
- Among other things, smart contracts can:
  - Function as 'multi-signature' accounts, so that funds are spent only when a required percentage of people agree
  - Manage agreements between users
  - Store information about an application, such as domain registration information or membership records

Katten
Katten Muchin Rosenman LLP

ERC20 Protocol

- An important innovation in the creation of Ethereum-based tokens is the ERC20 protocol standard.
- Similar to how the HTTP protocol defined the internet, ERC20 is a protocol that defines a set of commands that a token should implement.
- ERC20 is not a technology, software, or piece of code, but rather a technical specification.
- The ERC20 protocol contains basic functions that tokens can implement to enable trading, including transferring tokens, inquiring the balance of tokens at a certain address, and the total supply of tokens.
- Essentially, ERC20 tokens are smart contracts that run on the Ethereum blockchain.