ALLEN & OVERY

The State of Crypto

Agenda

1. Blockchain Stats

Stats

01 Global spending on blockchain is expected to reach $20bn in 2024.

02 Organizations are forecast to spend nearly $8bn on blockchain solutions in 2022.

03 Blockchain is a top-5 priority within several organizations across financial services and beyond.

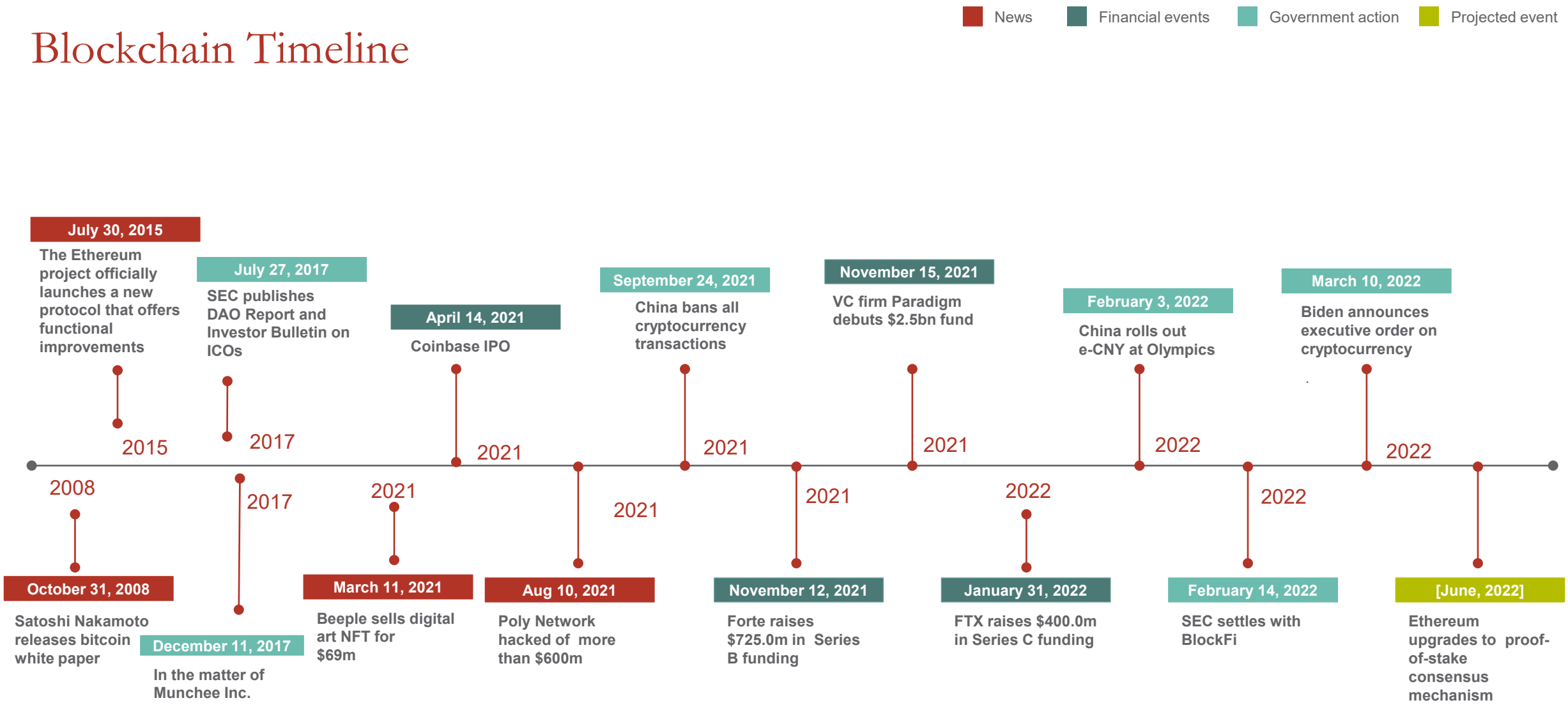
04 45 million Americans own digital assets.

05 51% of that group have bought cryptocurrency for the first time within the last 12 months.

06 24% of Americans don’t understand how cryptocurrency works!

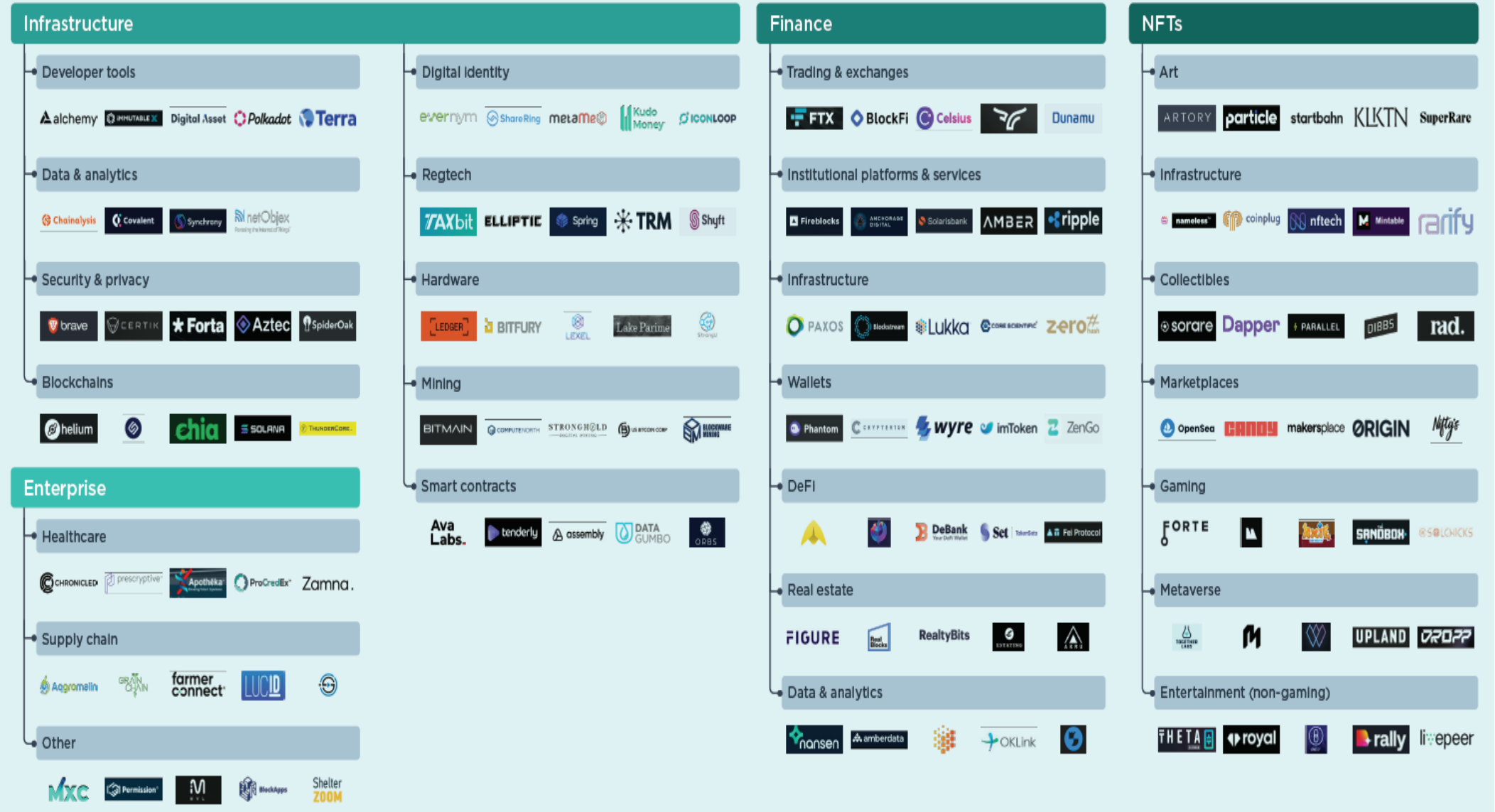
2. Blockchain Timeline

Blockchain Timeline



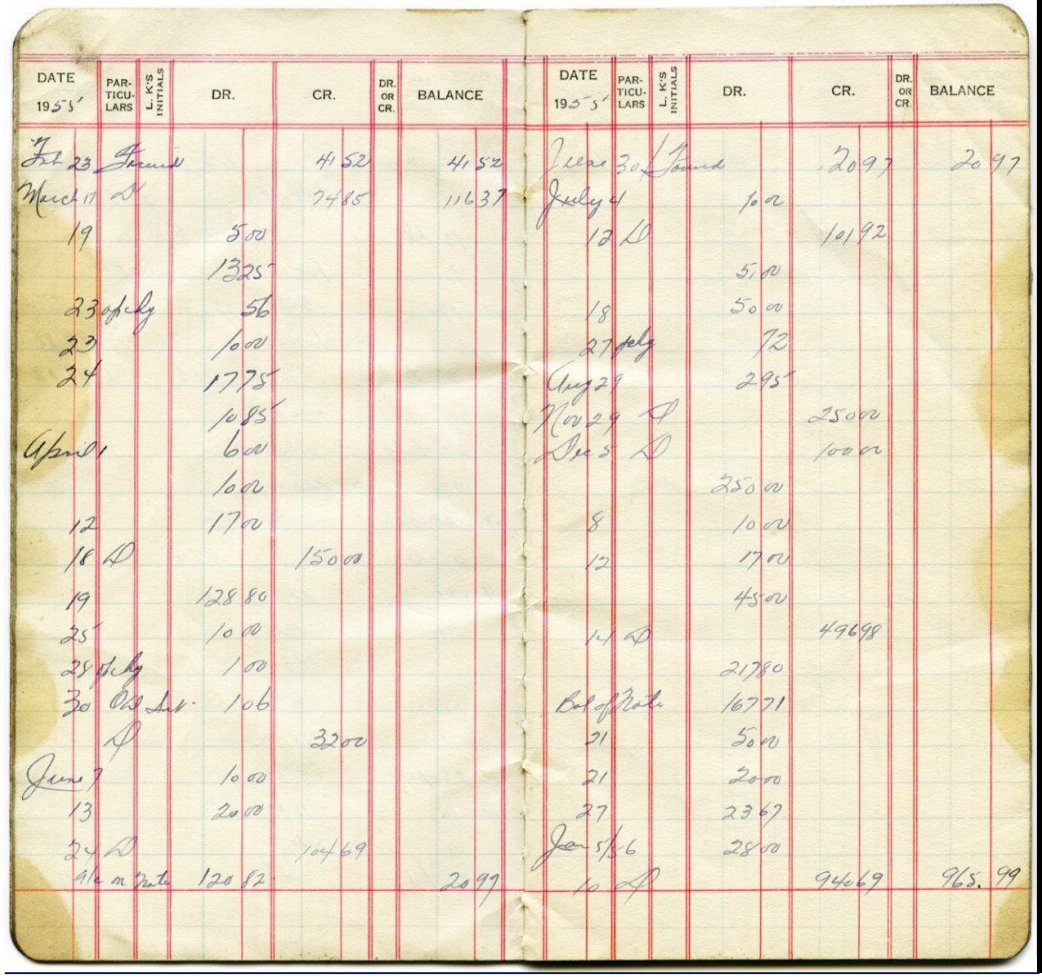
3. Blockchain Ecosystem

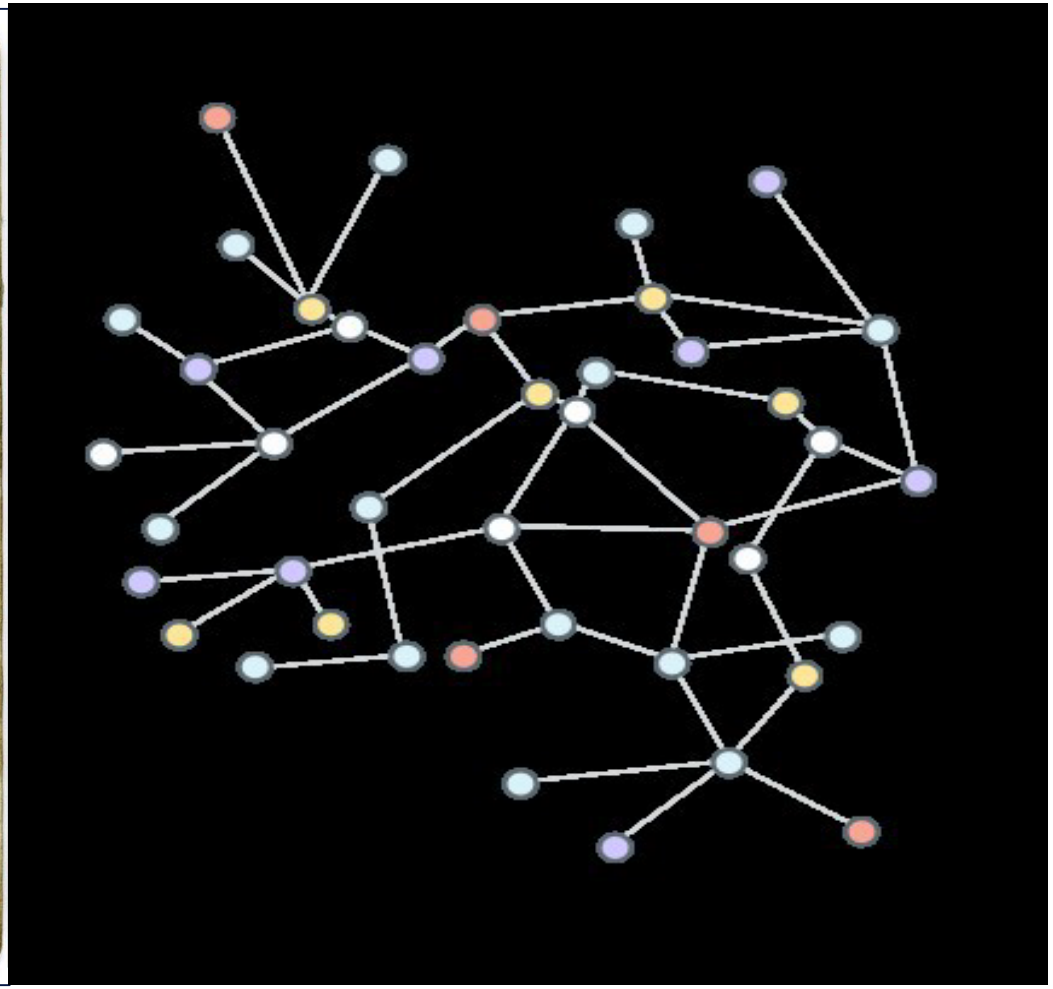
Blockchain Ecosystem



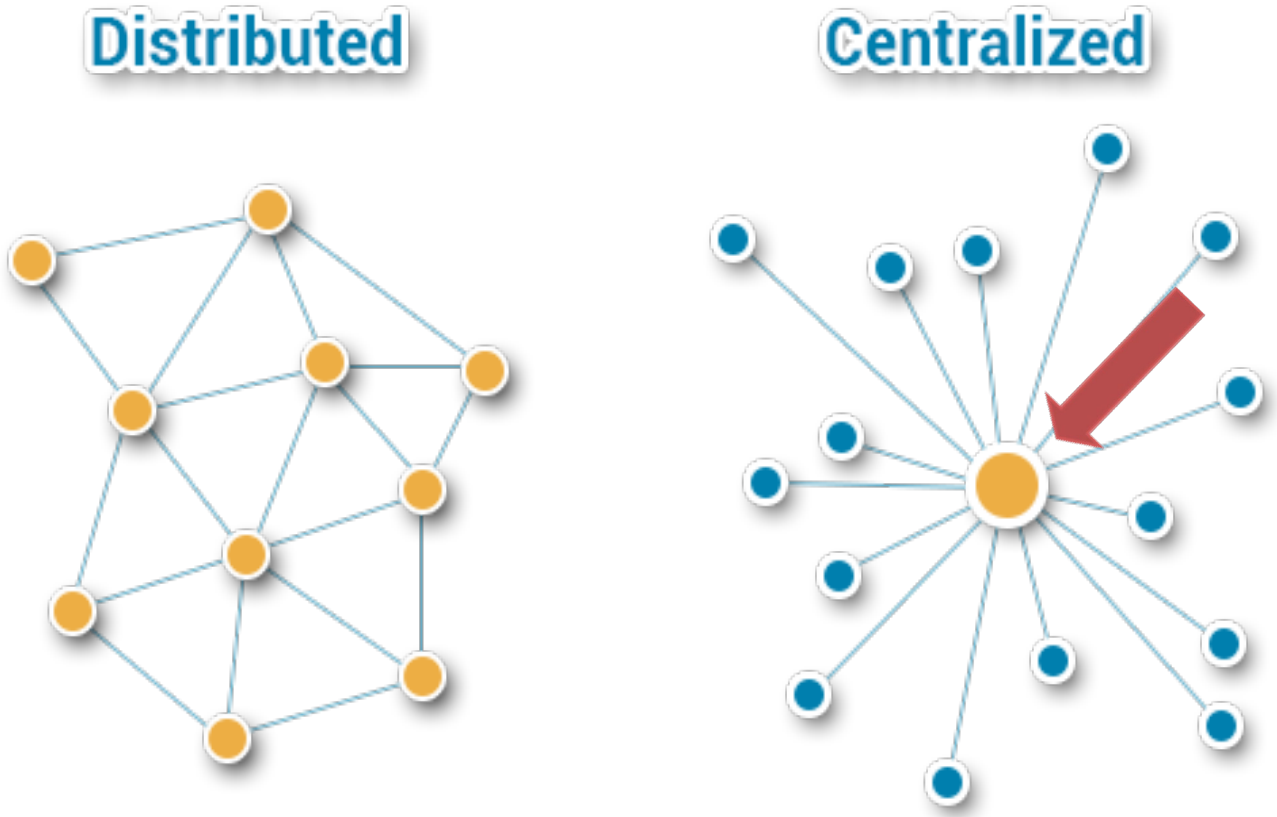
4. Understanding Blockchain and Smart Contracts

Centralized vs. Decentralized Ledgers





No Single Point of Failure

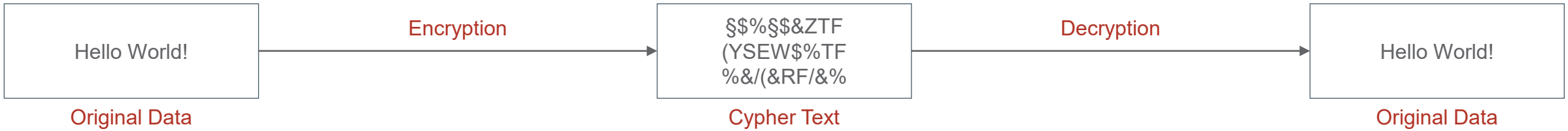


Cryptography

Protecting data from being accessed by unauthorized people.

The digital equivalent to closing a lock is encryption, while the digital equivalent to opening a lock is decryption.

Encrypted data are called ***cypher text***



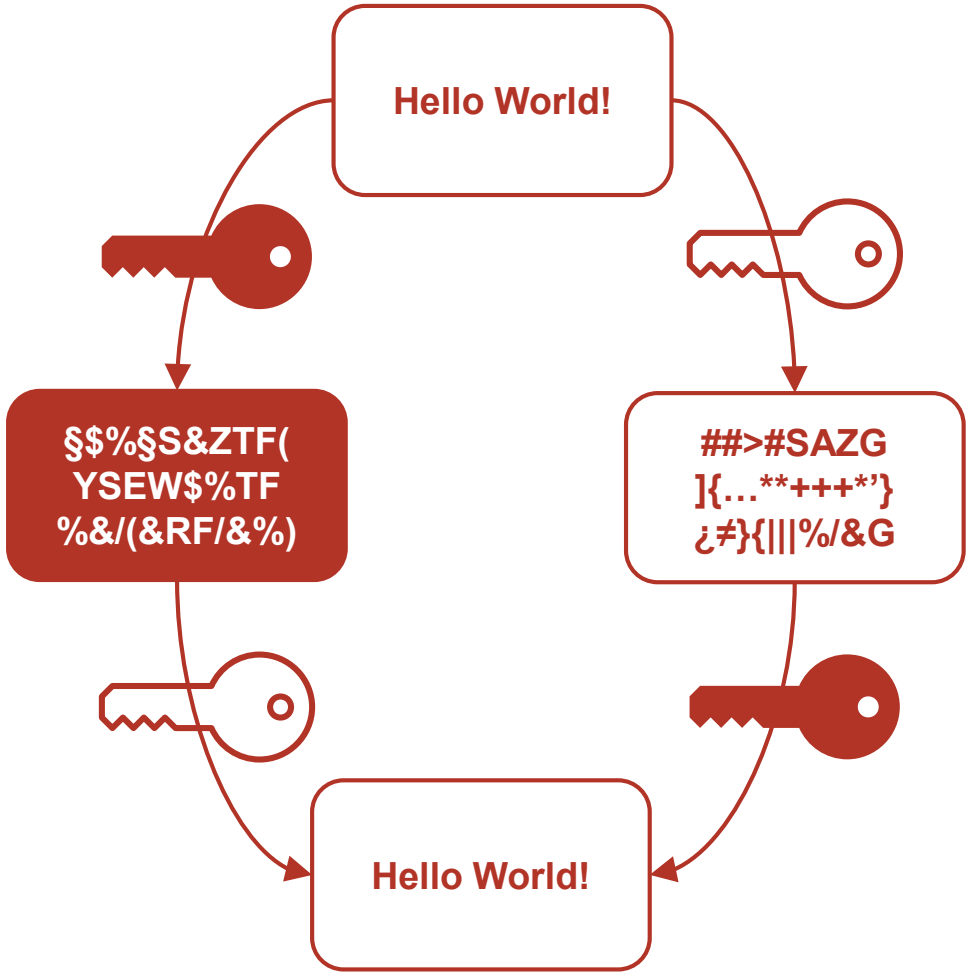
01 Start with some data

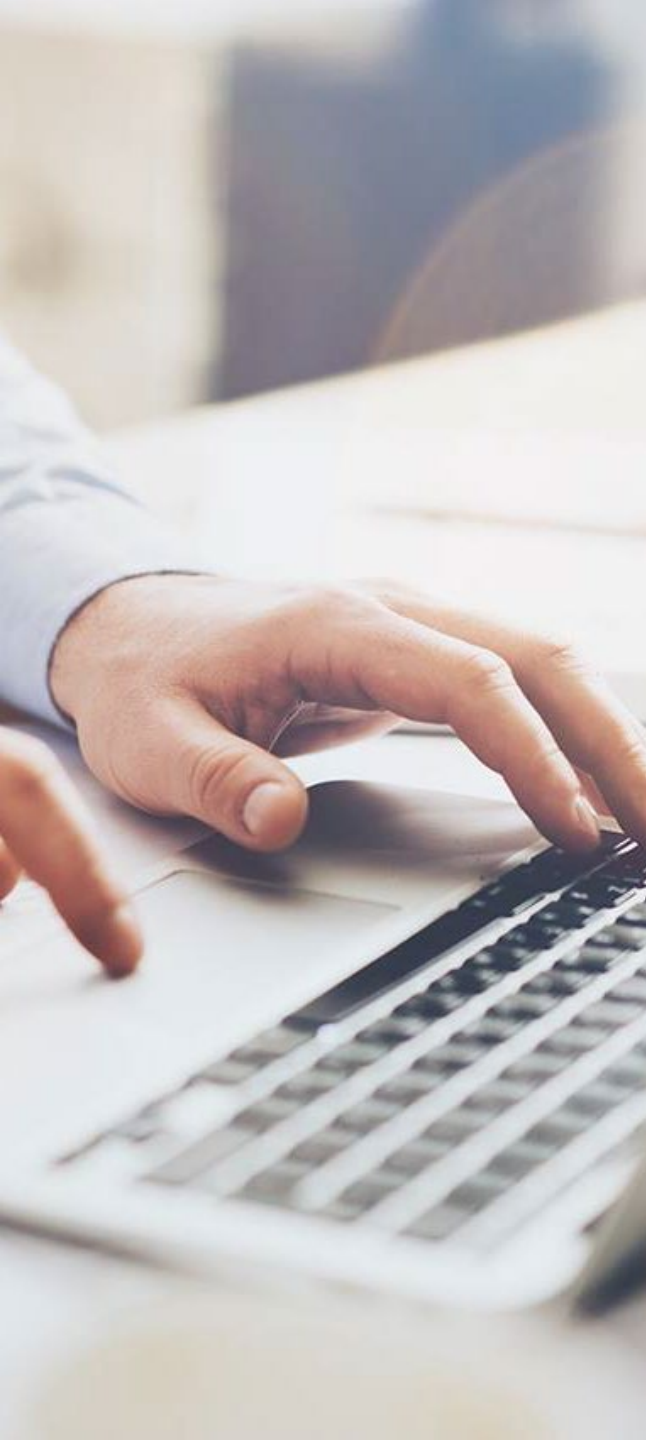
02 Produce cypher text by encrypting the original data with a cryptographic key

03 Preserve the cypher text or send it to someone

04 Recover the original data by decrypting the cypher text with a cryptographic key

Asymmetric Cryptography

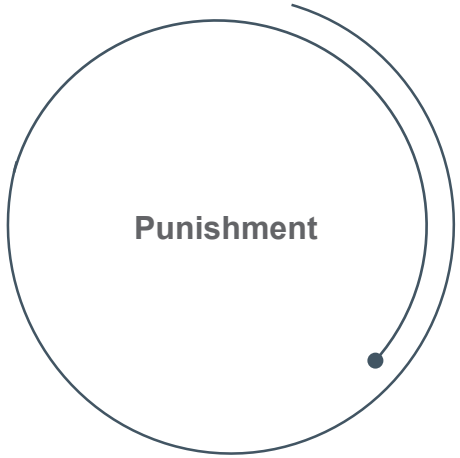


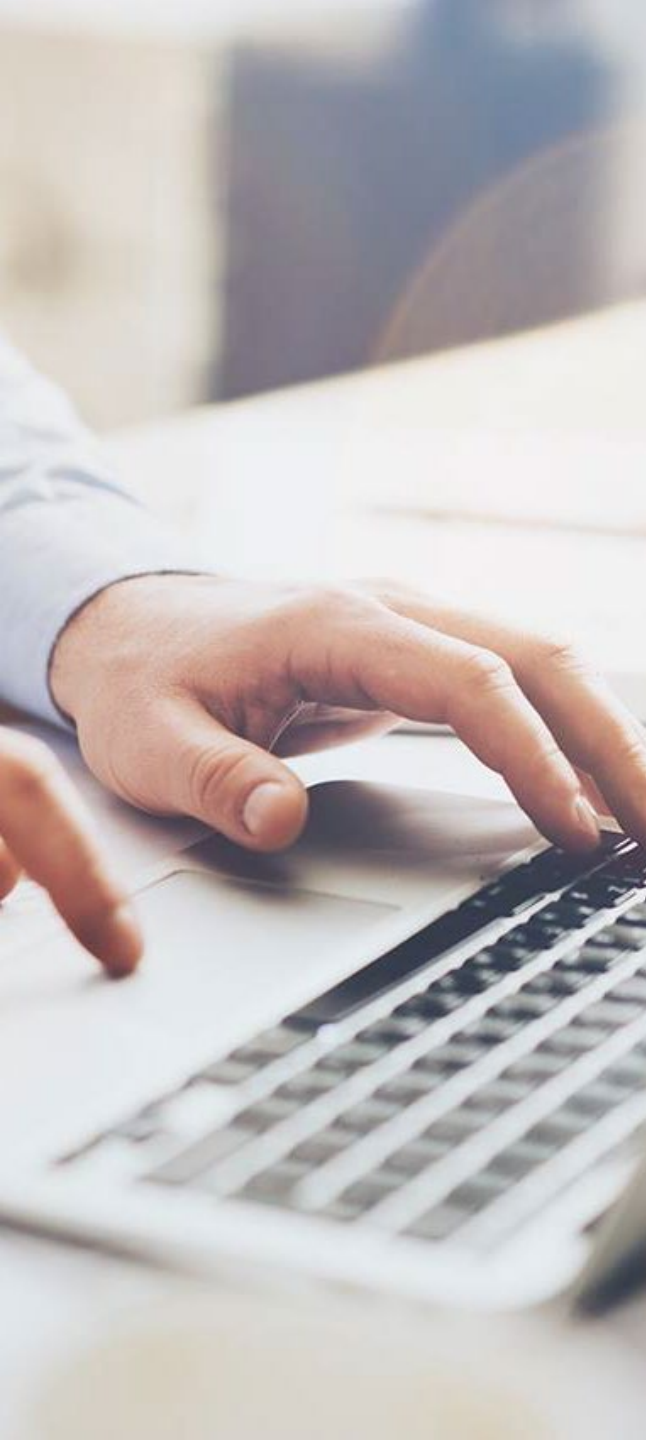


Incentive Mechanisms

The blockchain-algorithm is a sequence of instructions that governs how nodes process new transaction data and blocks.

The individual rules and procedures can be traced back to the following building blocks:





Consensus Mechanism

A system that allows all the computers in a crypto network to agree about which transactions are legitimate.

Proof of Work

Proof of Stake

Proof of Authority

Blockchain Defined

Blockchain is a system of ledgers containing immutable (write-once and read-only), time-stamped, and connected blocks of data, which is operated:

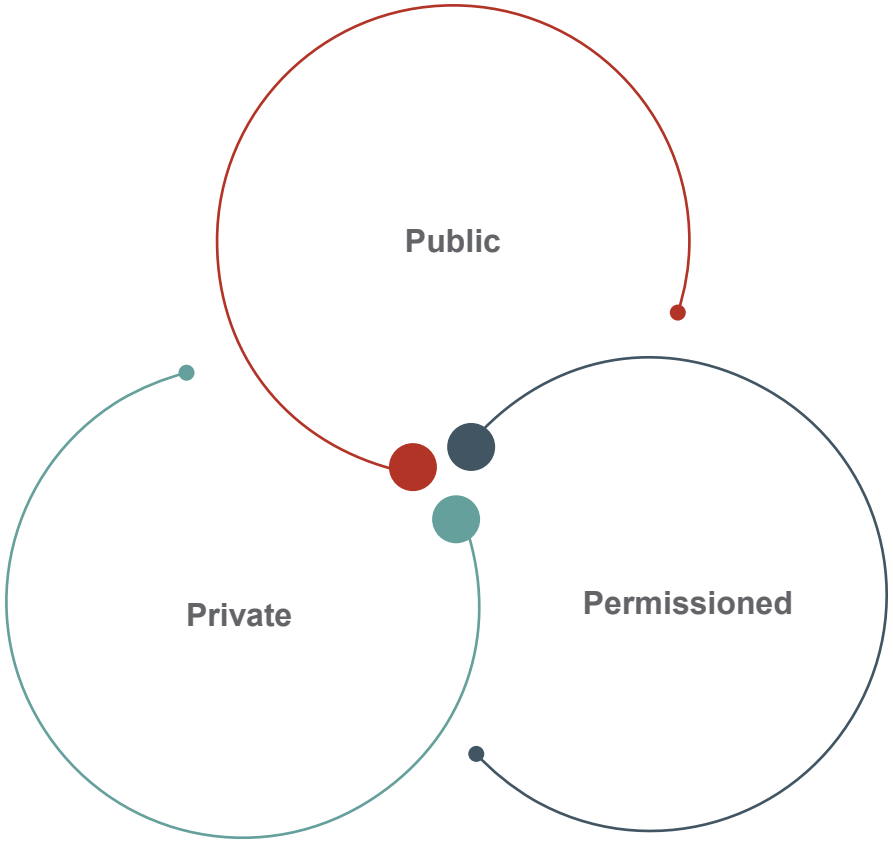
01 In a decentralized manner, by a peer-to-peer network of unaffiliated parties that uses the Internet as a network for connecting the individual nodes

02 Through pre-defined consensus mechanisms in lieu of a central authority

03 By employing (military-grade) cryptography in order to prevent the ability to edit or tamper with the information recorded in it

How Blockchain Works

Depending on the objectives of a given project, blockchains can be structured so that they are:



Public Blockchains

Public blockchains are large distributed networks based on **open-source code** that is developed and maintained by their respective communities

Anyone can participate in a public blockchain at any level, i.e., anyone can read a transaction record as well as write data and validate the transactions (also referred to as "**mining**") in exchange for a given cryptocurrency, without needing any permission or providing any identification

Examples of public blockchains include **Bitcoin** and **Ethereum**

Permissioned Blockchains

Permissioned blockchains are also large distributed networks; however, **they may or may not be based on open-source code**. They operate under the leadership of a known entity that determines the role that individuals can play within the network

They may or may not use cryptocurrencies as the incentive mechanism for participants to serve the network

Examples of permissioned blockchains include **Ripple** and **Corda**

Private Blockchains

Private blockchains are smaller and **centralized networks**

Their membership is limited and closely operated and controlled by one entity

Transactions are validated internally

As a result, the use of cryptocurrencies is not currently warranted

Examples of private blockchains include Monax and MultiChain

Blockchain can record and facilitate the transfer of any assets…

Physical Assets

House

Boat

Car

Digital Assets

Music

Images

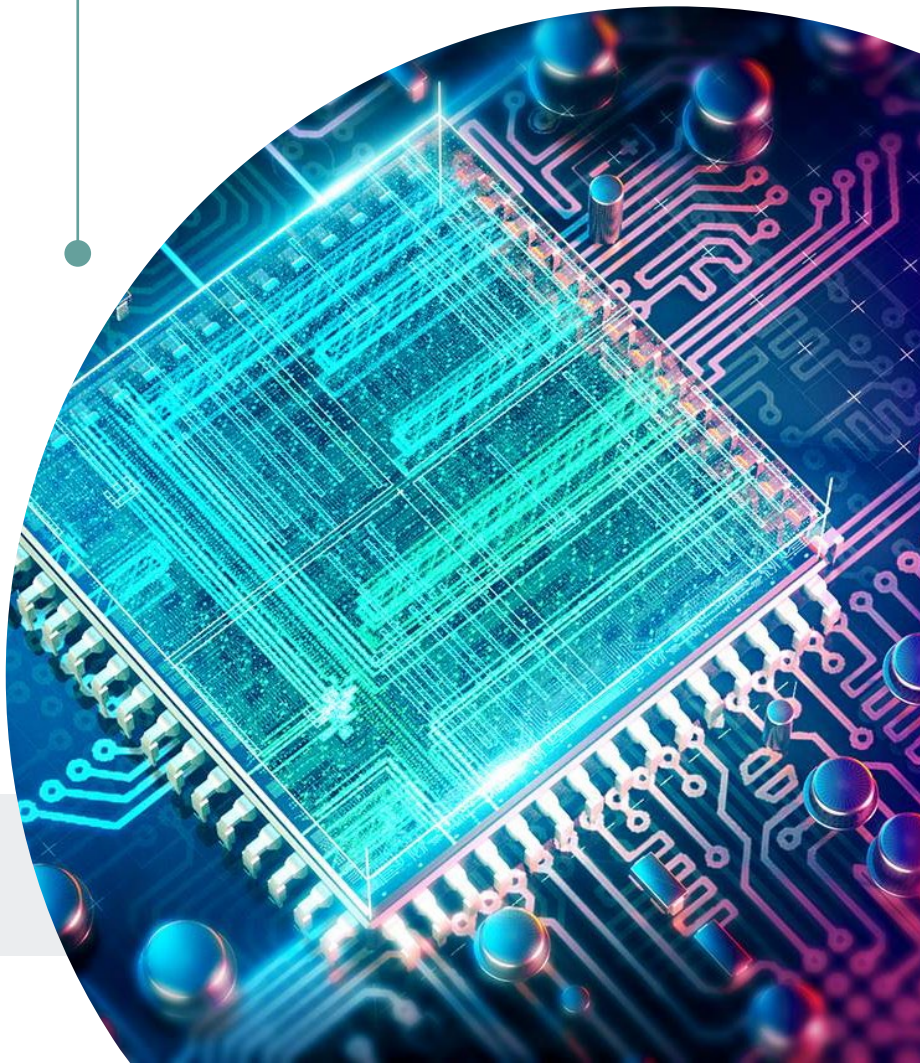
eBooks

Intangible Assets

IP

Security

License



Virtually anything of value can be tracked and transferred on a blockchain network.

An Intro to Smart Contracts

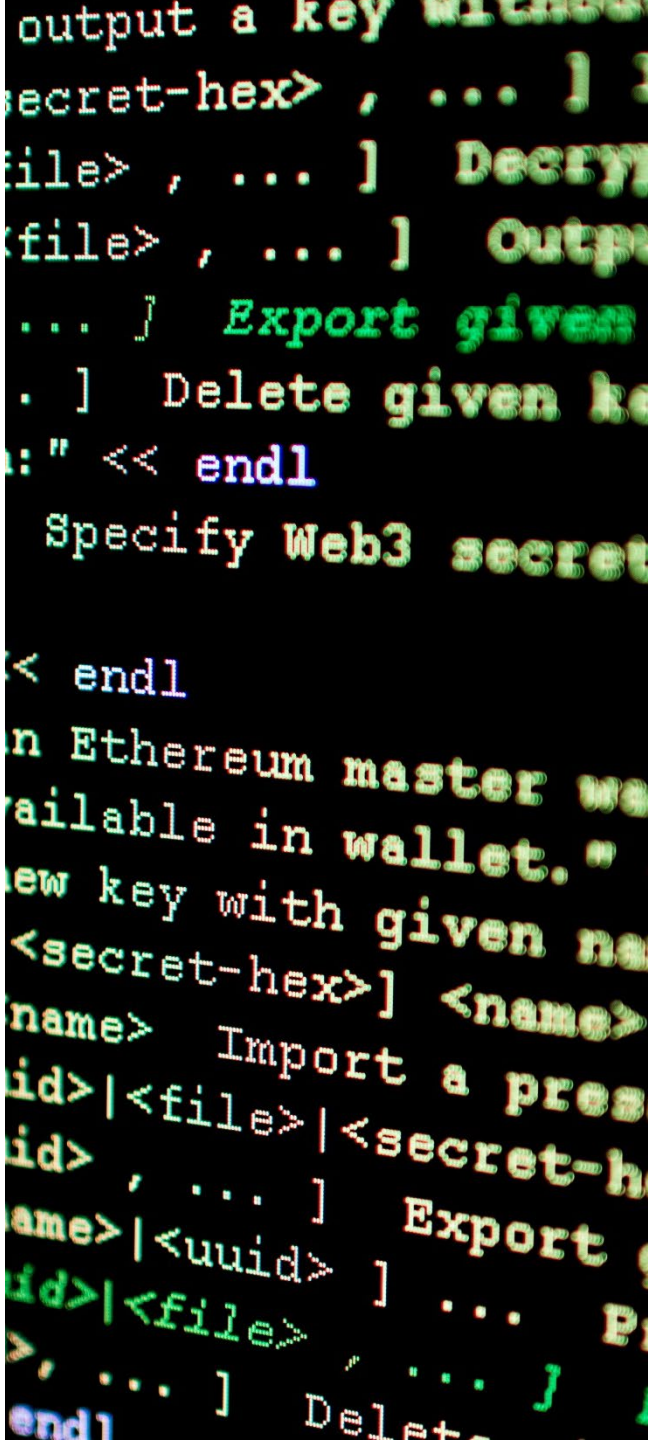
01 “Smart contracts” is a term used to describe **computer code** that automatically executes all or parts of an agreement and is stored on a blockchain-enabled platform.

02 If the parties have indicated, by initiating a transaction, that certain parameters have been met, the code will execute the step triggered by those parameters.

03 The input parameters and the execution steps for a smart contract need to be specific and objective: **if “x” occurs, *then* execute step “y.”**

04 The tasks that smart contracts are performing are fairly rudimentary.

05 As the adoption of blockchain spreads, and as more assets are tokenized or go “on chain,” smart contracts will likely become increasingly complex and capable of handling sophisticated transactions.



5. Blockchain Implementations

Blockchain Applications

Some of the most well-known applications of blockchain technology are in financial services (remittance, trade finance and financial assets, etc.)

However, the practical applications for blockchain technology go way beyond financial services and include:

6. Understanding Cryptocurrencies, Stablecoins and NFTs

Definition of Cryptocurrency

A cryptocurrency is generally understood to be a digital representation of value (which value is largely determined by the willingness of users to accept it) that is:

01 Issued and managed through the use of blockchain technology

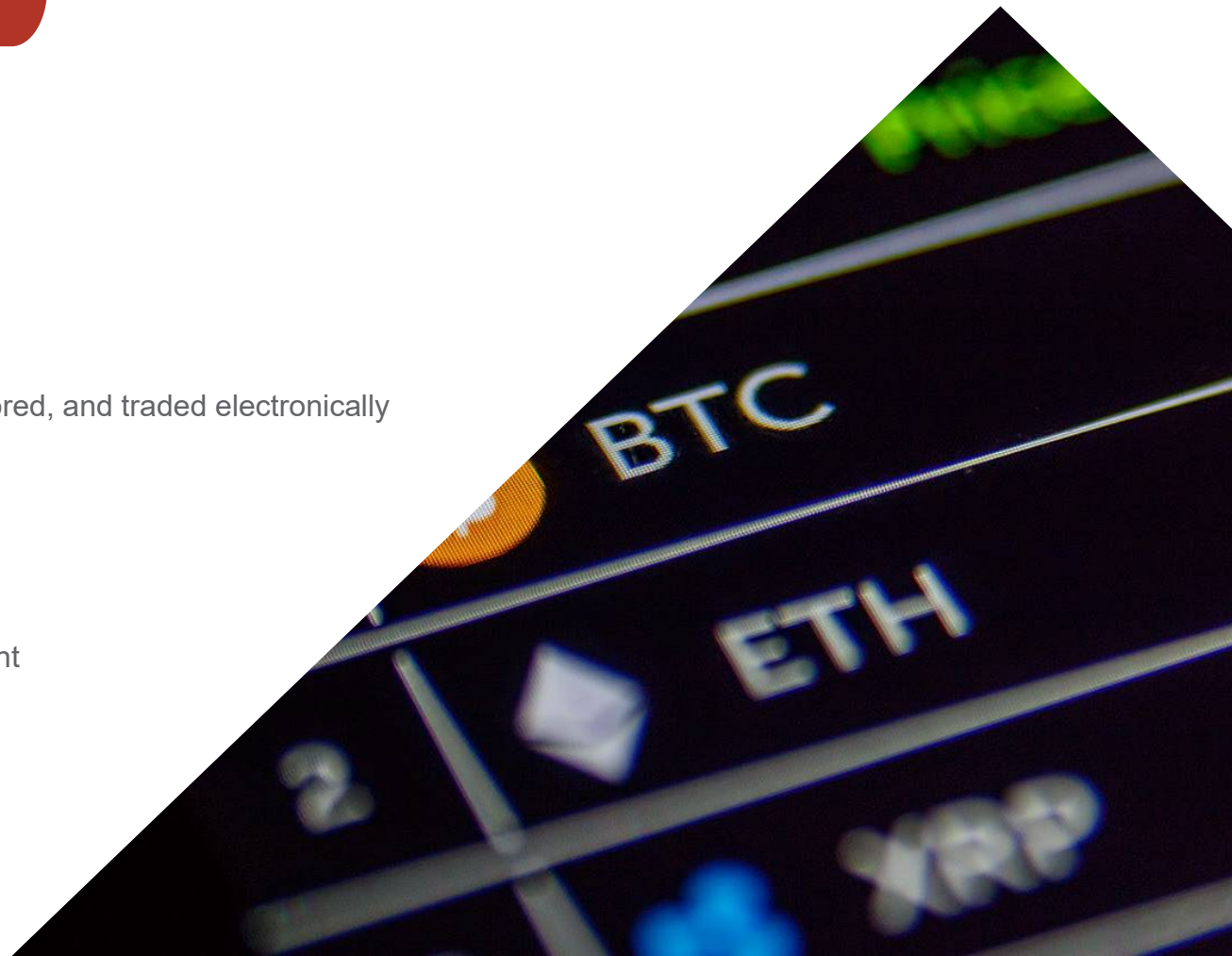
02 Secured by cryptography

03 Designed to work as a medium of exchange that can be transferred, stored, and traded electronically

04 Not denominated in a fiat currency
(although some cryptocurrencies are convertible into fiat currency)

05 Not a liability of any entity nor backed by any central bank or government
(and therefore lacking legal tender status)

06 Supplied in limited amounts (i.e., Bitcoin has a 21m Bitcoin cap)



Bitcoin

Digital money that allows for secure peer-to-peer transactions on the Internet.

Bitcoin is highly divisible.

You can hold, send, or receive fractions of a BTC.
The smallest unit, i.e. 0.000 000 01 BTC, is called a “satoshi”.

Ethereum

It is a decentralized computing platform that can run a wide variety of applications, including a universe of decentralized finance (or DeFi) apps and services.

“Ethereum is for more than payments. It's a marketplace of financial services, games and apps that can't steal your data or censor you.”

Anyone can create an application on top of the ethereum blockchain, making it compatible to a decentralized version of an App Store, where IoS apps can be built on top of an open format.

XRP

XRP is the native cryptocurrency of Ripple, a cryptocurrency payment system created by Ripple Labs Inc.

XRP is a "digital asset built for global payments”.

The XRP Ledger is an open-source cryptographic ledger powered by a peer-to-peer network of nodes.

Stablecoins – the "Holy Grail" of Cryptocurrency

01 Stablecoins are cryptocurrencies with stable value.

02 They share most of the features of cryptocurrencies, except volatility, making them more usable as a store of value, medium of exchange and unit of account.

03 There are two main varieties:

- Collateral-backed
- Algorithmically-pegged

NFTs

NFT stands for non-fungible token. It is a form of digital representation of an asset that is stored on a blockchain-enabled database, which essentially allows anyone to track its provenance, authenticity, ownership or transfer.

NFTs are “non-fungible” because unlike other cryptocurrencies, such as Bitcoin or Ethereum, NFTs are not interchangeable with one another. Think of $1, that is fungible; similarly a single bitcoin is fungible; it doesn’t matter what dollar bill or bitcoin I have, as long as I have a $1 or one bitcoin.

Imagine ‘uploading’ a file to a blockchain. In theory, any digital content can be minted into an NFT, any file, a JPEG, meaning digital images, or an MP3, meaning digital sounds, think photographs, songs, tweets, memes, video games items (for example, clothing that can be worn inside Fortnite) or more traditionally a digital deed to real estate.

$69,000,000

Who has Right to Mint an NFT?

Traditional issues of determining ownership/rights

- Joint ownership
- Work for hire
- Reversions of rights
- Multiple licensees

Internet-sourced content

- The original service on which any user-generated content resides may have ownership rights

Possible trademark issues

- Use of others' trademarks

Possible name, image, likeness issues

- Rights of privacy and publicity

7. The US Regulatory Framework

SEC Position Statement

On July 25, 2017, the SEC reiterated that:

"Whether a particular investment transaction involves the offer or sale of a security – regardless of the terminology or technology used – will depend on the ***facts and circumstances****, including* ***the economic realities of the transaction****."*

SEC – Digital Assets as Securities

SEC jurisdiction is limited to securities – key question – is the token a security?

The "Howey Framework" – regardless of the form of any product, including DAs, something is a security if it represents:

- An investment in a common enterprise
- With the expectation of profit
- Solely from the efforts of others
- Examples of cases which have supported the SEC's views – Telegram, Kik, (continuing Ripple case)
- Potential securities products include:
  - Digital tokens (stock tokens, stable value tokens and other digital assets); and
  - DeFi (decentralized finance) lending programs;
  - Securities derivatives (securities based swaps, security options)

SEC's view in the crypto area is expansive – most tokens are securities at least initially which then triggers many other SEC registration and anti-fraud requirements, including:

- Broker-Dealer Registration (and related requirements under Custody et al)
- Exchange/ATS BD Registration

Common themes and practical issues (until further regulatory clarity):

- Status of digital assets as securities (Ripple debate) – law firms coming under further pressure
- If securities, the offering must be properly exempt and the person(s) selling is/are not (an) unlicensed BD(s)
- Offshore trading platforms – "U.S. Person" status, unlicensed exchange and BD issues
- Custody

The journey from security to non-security

01

Director Hinman stated that neither bitcoin (BTC) nor ether (ETH) are securities, and that offers and sales of these cryptocurrencies are not securities transactions.

02

Hinman distinguished the **initial funding phase of a project**, which could take the form of an exempt offering of securities, from later sales of digital assets that represent currency or otherwise have utility value for a functioning network.

03

This second phase of a digital asset's development would not benefit from regulation as a security if it is sold to be used **only to purchase a good or service** available through the network on which it was created.

04

A digital asset transaction may no longer represent a security offering when the efforts of others "are no longer a key factor for determining the enterprise's success," which can occur when the network on which the digital asset functions becomes "**sufficiently decentralized**."

Current Regulatory Landscape

March 9, 2022: Executive Order Ensuring Responsible Development of Digital Assets

- Signals for the first time a unified U.S. approach to digital asset policy to address lack of formal, cohesive approach
- Policy of coordination among many departments and agencies – SEC, CFTC, FTC, CFPB, FRB et al
- Focus on the R&D of a potential U.S. CBDC, i.e., "digital dollar"
- Consumer, investor and market protection

Digital Assets as Securities – The SEC

- Howey Test – is the DA an "investment contract"? If yes, then securities laws apply to related sales and trading of products, trading platforms/exchanges
- 80+ crypto enforcement actions to date
- Multiple investigations involving centralized and decentralized exchanges and issuers

US Banking Regulators

- OCC, Fed, FDIC – multiple requests, guidance and statements on regulation of digital assets
- Treasury/FinCEN and OFAC

Digital Assets as Commodities – The CFTC

- Crypto as commodities
- Enforcement (Bitfinex, Tether)

Other

- States (NY, NJ, Other)
- IRS – Virtual Currency is "Property"
- Revisions to UCC
- Data Protection

State Licensing Requirements

New York State Department of Financial Services Virtual Currency Regulations

- License ("BitLicense") required to conduct any "virtual currency business activity" involving the State of New York or a New York resident. "Virtual currency" broadly defined to include any type of digital unit that is used as a medium of exchange or a form of digitally stored value (subject to certain limited exceptions).
- "Virtual currency business activity" defined as: (i) receiving virtual currency for transmission or transmitting virtual currency, except where the transaction is undertaken for non-financial purposes and does not involve the transfer of more than a nominal amount of virtual currency; (ii) storing, holding, or maintaining custody or control of virtual currency on behalf of others; (iii) buying and selling virtual currency as a customer business; (iv) performing exchange services as a customer business; and (v) controlling, administering, or issuing a virtual currency.
- Entities chartered under NY Banking Law do not need a BitLicense but must obtain DFS approval to engage in virtual currency business activity

- States lack uniformity in regulation, and it is important to understand the laws of each state in which you are conducting business.

- Virtual currency "money" or "currency," under federal law and virtual currency businesses can be are typically considered "money transmitters" subject to related state laws and licensing requirements.

8. Financial Crimes and Anti-Money Laundering

AML vs. ML

1

Two different types of risks in play:

- **Anti-Money Laundering** (the Bank Secrecy Act – Programmatic Requirement)
- **Money Laundering** (Specific Conduct Based Prohibition – Don't Move Dirty Money)

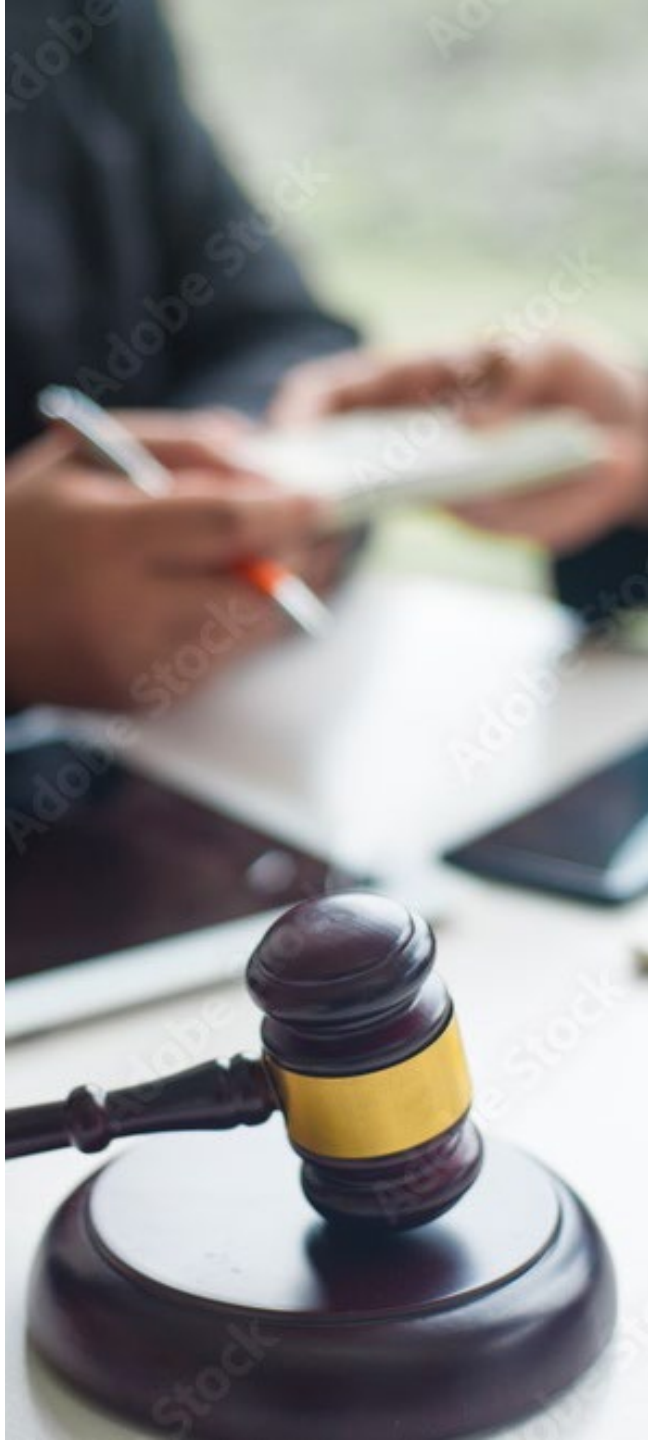
2

Both have civil and criminal penalties

3

February 2022 National Money Laundering Risk Assessment says:

"*While the use of virtual assets for money laundering remains far below that of fiat currency and more traditional methods, as noted below, U.S. law enforcement agencies have detected an increase in the use of virtual assets to pay for online drugs or to launder the proceeds of drug trafficking, fraud, and cybercrime, including ransomware attacks, as well as other criminal activity, including sanctions evasion.*"



Understanding AML

AML requirements

1. Governed by the Bank Secrecy Act or BSA (Title 31 USC 5311 et seq) and accompanying regulations.
   Regulatory expectations also found in agency specific regulations and guidance.

2. Robust and intensive set of programmatic recordkeeping, reporting and monitoring requirements and expectations.
   - Applicable to financial institutions as defined in the statute.
   - Designed, at a high-level, to prevent the financial institution from being a conduit for money laundering or terrorist financing and to assist law enforcement with their investigations.

3. Setting aside banks, those in the business of buying/selling/trading convertible virtual currencies or digital assets will almost always qualify as a financial institution requiring adherence to the BSA:
   - whether as an MSB, which will require licensing in the various states and compliance with state money transmitter laws or through the SEC or CFTC.

4. Compliance is cost intensive and labor intensive.

5. - Limited jurisdiction
   - As noted, limited to financial institutions defined in statute.
   - Domestic-based, limited extraterritorial application.

Understanding AML – Digital Assets

AML challenges specific to digital assets – a sampling of issues

Compliance with the BSA/AML requirements is technically difficult

- Travel Rule:
  - Requires customer and transaction information to be broadcast at the same time as the asset transfer to a receiving financial institution.
  - The blockchain is not currently set up to transmit and receive such information.
- What do I know about the Digital Asset itself?
- KYV – Know Your VASP (see next point)

Patchwork of state licensing laws

- For MSBs (often thought of as VASPs, but VASPs technically broader), time-intensive process to be compliant (in many cases at least a one-year long process, if not longer).
- Federal criminal violation to operate in a state without a license (18 USC §1960).

Regulation in flux

- FinCEN has issued multiple versions of guidance in this area and continues to propose new rules (for example proposed updated Travel Rule).
  - The landscape is far from settled, yet regulation by enforcement is still present.
  - If the institution is ultimately a conduit for money laundering or terrorist financing, there will be an intense investigation on how the program "missed it."

Understanding Money Laundering

1

Money Laundering (Title 18 USC 1956-1956).

– Set of specific conduct-based statutes – the affirmative act of knowingly facilitating actual money laundering.

– Statutes have broad application, including extraterritorially, and are not limited solely to financial institutions.

2

Digital Asset Specific - a sampling:

– While getting better, perception remains that digital assets area are a prime mechanism for money laundering.

– Ignoring red flags will, as with all things, be viewed in hindsight and will require an extensive and convincing explanation to ensure that you are not “turning a blind eye” to facilitating illicit activity.

3

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9. CFIUS

CFIUS

The U.S. Committee on Foreign Investment in the United States ("CFIUS") is the interagency U.S. government body originally created by President Ford in 1975 to review the national security implications of foreign investment activity in the United States. CFIUS reviews foreign acquisitions, mergers, and takeovers of existing businesses in the United States for U.S. national security concerns.

The recent regulations implementing FIRRMA give CFIUS the authority to review transactions through which a non-U.S. person could gain "control" of a U.S. business, and certain non-controlling investments in U.S. businesses involving critical technologies, critical infrastructure, or sensitive personal data.

"Critical technologies" includes the currently undefined category of "emerging technologies," which likely comprises certain **blockchain technologies** (along with artificial intelligence, quantum computing, robotics, and data analytics).

Questions?

The A&O Blockchain Group

Our global Blockchain expertise

Our group provides a holistic, comprehensive approach to the rapidly growing areas of cryptocurrencies, blockchain and smart contracts. Our cross-disciplinary team has deep experience representing investors, companies, financial institutions and entrepreneurs in these matters.

- Venture Capital and Private Equity
- Capital Markets and Securities
- Technology Transactions and Internet of Things
- Financial Transactions
- Fintech
- Investment Management
- Tax
- Financial Services
- Regulatory
- M&A
- Data Security and Privacy
- Litigation
- Intellectual Property

Our clients include:

- Venture, hedge and private equity funds and their portfolio companies
- Funds interested in trading digital assets
- Token sellers
- Financial institutions and asset managers
- Cryptocurrency exchanges and relayers
- Token marketers and broker-dealers
- Major global investment banks

Our cryptocurrencies and digital asset expertise

How we can help

We offer strategic advice at every stage of the product lifecycle, whether that is fundraising for and developing new products, ensuring existing products continue to comply with fast-paced regulatory change or where potential regulatory breaches require remediation and/or engagement with the regulator and other key stakeholders. We also advise on commercial and corporate transactions required to bring parties together on projects, including consortia and joint ventures. We are frequently called to advise on legal issues regarding the characterization and nature of cryptoassets. For example, understanding the ability to enforce a claim to a cryptoasset is essential for a scaled business proposition.

From a regulatory standpoint, we regularly advise on the application of the existing complex matrix of requirements to the issuance, custody, settlement and secondary market trading of cryptoassets. We are pleased to be involved in a series of transactions that set industry precedents and where we successfully marry our outstanding capital markets and regulatory knowledge and expertise with our understanding of the technology and the commercial landscape.

Global reach

We have one of the broadest footprints of any legal practice. Our expanding network of over 40 offices around the world, and our Global Experts and Markets program means we are equipped to work seamlessly with clients wherever they are doing business. The team includes market-leading specialists in payments, e-money, banking and financial crime regulation, who work closely with our technology experts to provide a unique, commercial blend of technical and sector-focused knowledge and advice.

Fintech regulatory expertise

Our team covers a broad waterfront of issues facing broker-dealers and other U.S. and global financial institutions engaged in securities transactions within the United States, including fintechs, foreign and domestic banks, insurance companies, investment advisors and private fund managers. Our clients range from financial institutions specializing in investment banking to market leading clearing firms and prime brokers. There are many overlapping regulatory issues that arise for fintech companies and our team helps clients navigate the complicated web of financial regulation.

We have extensive experience counseling foreign and domestic financial institutions on issues related to their status as brokers and dealers and helping financial institutions to register with the SEC and to become members of self-regulatory organizations (SROs) such as FINRA. We also assist broker-dealers in developing and revising written compliance policies and supervisory procedures and conduct reviews of their supervisory systems. Once registered, we provide ongoing regulatory counselling to help our clients comply with the numerous regulatory requirements that apply to their businesses.

Allen & Overy marries our regulatory expertise with deep and broad experience in the technology sector to advise on some of the cornerstone projects in the fintech market. We work with some of the most successful technology companies including Nivaura, which recently launched the first automated Ether-denominated bond, and have advised on a variety of initial coin offerings and virtual currency platforms. We have extensive experience advising fintech clients, with a specific focus on cryptocurrencies, including digital assets, on a broad range of issues including on both U.S. and cross-border acquisitions and regulatory matters relating to how existing and emerging legal and regulatory frameworks might be applied to new business models built on distributed ledger technology.

We know the regulators

Our U.S. and global Regulatory teams are actively engaged with regulators in the U.S. and around the world on the issues that technological change is creating for the legacy regulatory framework in the financial services sector. We distinguish ourselves from our competitors by providing a practice made up of attorneys who are in the middle of almost every current regulatory initiative and debate concerning regulatory change in the financial services industry. Many of our attorneys have significant prior experience with the SEC, the DOJ, Federal Election Commission, the Office of the Comptroller of the Currency, and on Capitol Hill. Our team has an intimate familiarity with the banking and securities laws and regulations, and is regularly sought after by leading financial industry associations for advice and training. This dialogue increasingly involves technology driven change in the delivery of financial services and products.

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Dario de Martino is a partner in the New York office of Allen & Overy, and is a member of the firm's Mergers & Acquisitions Group.

He serves as co-chair of Allen & Overy's Blockchain and Fintech Group, advising clients on transformative matters relating to cryptocurrency and blockchain-enabled technologies.

He represents a broad array of major U.S.-based and multinational technology (including software, semiconductors, IoT, cloud computing and AI), financial services, life sciences + healthcare, and industrial companies.

His experience in the digital assets space includes advising market participants on a variety of complex matters relating to crypto M&A, strategic investments and other private equity transactions, digital assets offerings, blockchain licensing and service agreements, and structuring of new blockchain-enabled products that may implicate securities or other laws and regulations.

Dario is an active leader in the firm's diversity, equity, and inclusion initiatives.