Global Perspective on Coins, ICOs, Policies

Heung-No Lee

March 5th 2018

The aim of this lecture note is

- To provide a balanced view towards
  - **Coin/blockchain projects ; and**
  - **ICOs ; and**
  - **Regulations and policies worldwide.**

- Balanced view is fundamental to future development and reducing risks.
- They must include the viewpoints of lawmakers and gate keepers.

What is an ICO?

- Startups in the blockchain world uses Initial Coin Offering (ICO) as a tool to raise funds.
- It is similar to an IPO, but with some notable differences.
  - "Rather than looking to traditional angel or venture investors to place capital as an equity investment, companies developing new blockchain-based products and services have turned to the cryptocurrency community to crowdsource the purchase and usage of their token in an ICO." (Forbes Sept. 27th 2017)
- In an ICO, the startup raise funds in the forms of Bitcoins and Ethers with trade of startup's crypto-currencies.
  - Trades against other digital assets and fiat (USD, EUR, GBP) are also possible.
  - Cf) Crowdsale, crowdfunding and token sales.
- Reference: https://icowatchlist.com/education/history-and-evolution-of-icos

How are ICOs created?

- Early days, the launching an ICO itself was sufficient.
- But today, there are many competitors.
- Values to the investors became of keen interest, such as ratio of token trade and ideas how to build trust, what values given to community.

1. **Pre-announcement** of the cryptocurrency project on Bitcoin talk.
2. **Publication of a white paper** discussing project, business model, development roadmap, integration of the currency within the project, the team behind it, and how it benefits the community. The community responds to the project, allowing the project team to implement improvements and upgrade it to generate traction among investors.
3. **Offering**. A contract, describing the terms of the transaction, life cycle of the project, target investment amount, project deadlines, financial instrument to be traded, which is usually a digital token in case of cryptocurrency projects, the rules governing token usage and investors' rights.

History and evolution of ICOs

- https://icowatchlist.com/education/history-and-evolution-of-icos
- The first reported ICO was conducted by Mastercoin in 2013.
- Mastercoin raised close to 5,000 bitcoins or $500,000 at the time.
- Since the first ICO, there has been a flood of ICOs launches.
- In 2017, there are 92 ICOs, raising around $1.25 billion.
- Ethereum ICO in 2014, raising millions of dollars.
  - "The price of ether is initially set to a discounted price of 2000 ETH per BTC, and will stay this way for 14 days before linearly declining to a final rate of 1337 ETH per BTC. The sale will last 42 days, concluding at 23:59 Zug time September 2." (https://blog.ethereum.org/2014/07/22/launching-the-ether-sale/)
  - The ether has risen more than 1000 times. (.5USD 10/2014, 600USD today)

ICOs vs IPOs: What is the difference?

- Both ICOs and IPOs aim to raise capital, but they differ significantly in terms of their mechanics and regulatory frameworks.
- IPOs are done by established private companies with **proven track records**.
- ICOs, on the other hand, are done **by startups**, and in many cases, they **don’t even have a ready product**. **ICOs in such cases are done based on white papers which give some ideas on their product and utility**.
- **IPOs have to stick to strict regulatory guidelines and obtain regulatory approvals from different authorities** such as the Securities and Exchange Commission in the US.
- **ICOs, on the contrary, are conducted on decentralized platforms and are not even restricted by international borders.**
- In terms of returns, IPOs offer **dividends** to their shareholders, whereas ICOs offer a **promise of increased value in future**.

How to participate in an ICO?

- The first requirement to participate in an ICO event is the ownership of cryptocurrencies. Start by registering an account on a digital currency exchange. The next step is to load fiat currency such as USD, EUR, or Yen, in your account, and purchase the desired cryptocurrency, bitcoin or Ethereum etc. After the purchase, you can store your digital currency in a web wallet or choose a hardware cryptocurrency wallet.

- At the time of an ICO, start by carefully understanding the ICO agreement, which includes the details such as target price per coin, timeline, and other rules governing the transaction. Every company recommends specific wallets for the transaction, so go ahead and download the wallet. The norm is for ICO projects to provide a receiving wallet address on the ICO web page that people can send their contributions to. Investors are encouraged to send any amount they are comfortable with provided it corresponds with the price per project token. The project team then in-turn delivers corresponding token amounts to the investor's wallet. The tokens can be stored on web, mobile, or hardware cryptocurrency wallet.

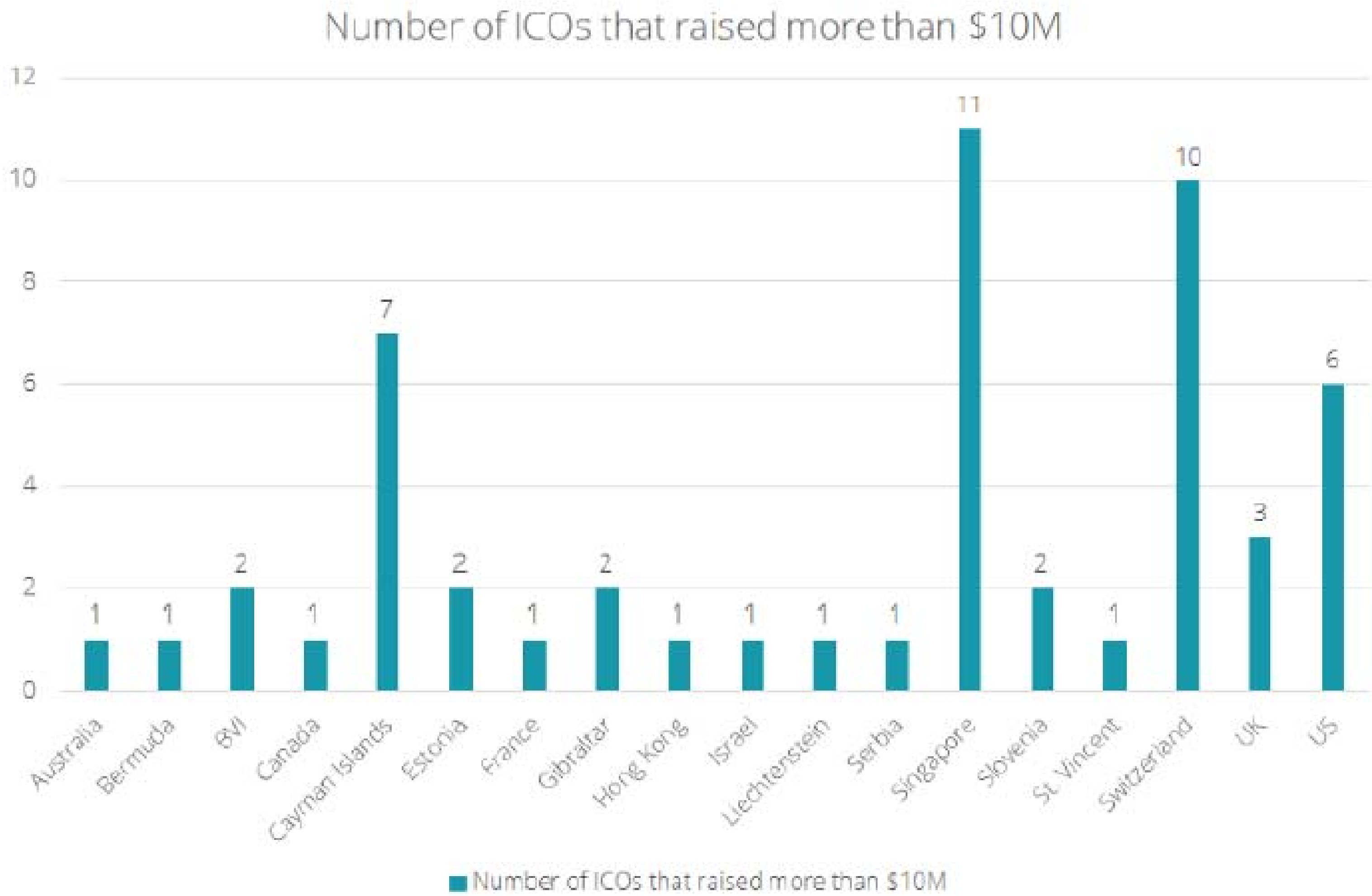
- Several ICO listing platforms such as ICOWatchlist.com offer a list of upcoming ICOs, allowing investors to find out more about the project. These listing platforms do some form of vetting before listing projects so one could to a larger extent rely on their information.

- The key takeaway is to understand the offerings up front and read the industry outlook of every project before investing. Find out the risks and benefits of the project, and do due diligence before investing any amount of money.

Advantages of investing in ICOs

- One of the foremost advantages of investing in ICOs is the chance of investing in a new or upcoming technology. Every single ICO is established to revolutionize an industry in one way or the other. A careful analysis of ICOs could help investors get on board to the right startup.
- Most of the ICOs price their tokens modestly, allowing even small investors to participate in the sale. Un-like a traditional IPO, small investors have a chance to invest little money, and in the event that the underlying project does well, the investor reaps tremendous returns in the future.
- ICOs follow the limited supply-demand principle, allowing their cryptocoins to gain value in the future. Its initial investors could leverage the economic prominence of the principle, increasing their chances of profiting exponentially.
- In the current cryptocurrency environment, you can use crypto-tokens to purchase the services offered by the underlying company. If the cryptocurrency gains popularity and market trust, chances are that you can use it for third-party purchases, just like Bitcoin.

Best Countries for ICOs



What are the risks investing in ICOs?

https://icowatchlist.com/education/history-and-evolution-of-icos

- Starting with the risks involved in ICO investing, first one is the complete or absence of regulations. Unlike IPOs which are monitored by regulatory bodies, ICOs neither follow any regulatory requirements nor is it easy to regulate them. ICOs do not fall under any particular geographic location, making it a challenge to regulate them.

- ICOs hardly go through professional due diligence or vetting. In the financial industry, due diligence is the first step taken before making any investments at all. It helps investors understand the investment risks, offers a comprehensive view of the company's financial condition, and analysis the business model of the company. ICOs, on the other hand, have an equivalent of an investment prospectus in the form of a website or whitepaper.

- Most ICO projects do not have a proven business model and in most of the cases, not even a ready product. The industry experts agree that most of the ICOs are a longshot at best, which makes it risky to invest in them. ICOs are not restricted by geographical borders; in this case, if the issuer absconds with the money, there is very little an investor can do to retrieve their funds.

- If you have plans to invest in ICOs, understand that these are high-risk investments with little or no guarantees.

What are regulations in the ICO world?

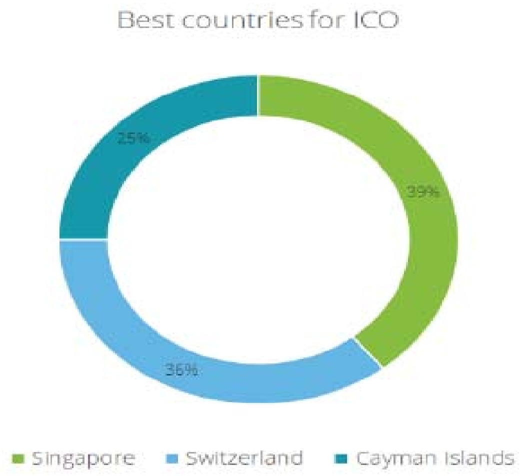
- When it comes to regulations in the ICO world, there are no strict laws regulating ICOs. In lieu of legal regulations, ICOs are bound by public vigilance, promoting practices such as the blockchain technology to offer transparency. The industry experts have long expected the government to step in and regulate ICOs. One of the recent regulatory developments in reference to ICOs has come from the US Securities and Exchange Commission (SEC).
- In its latest ruling on July 25, 2017, the SEC described some of the "coins" offered through ICOs as securities. The SEC further released their investigation of an ICO, addressing the primary issues involving ICOs. Some of the key findings of the investigation were:
  - "This Report reiterates these fundamental principles of the U.S. federal securities laws and describes their applicability to a new paradigm—virtual organizations or capital raising entities that use distributed ledger or blockchain technology to facilitate capital raising and/or investment and the related offer and sale of securities."
  - "The automation of certain functions through this technology, "smart contracts," or computer code, does not remove conduct from the purview of the U.S. federal securities laws"

Best countries include

- Singapore
- Switzerland
- Cayman Islands

USA is not!

Why?



Note that we decided not to include the United States in the list after the SEC issued the Munchee order which prevented Munchee Inc., a California based company that created a blockchain application that allowed its users to post the reviews of restaurants, from continuing its ICO campaign on its second day. Although the company states in its white paper that "a Howey analysis has been conducted to determine that, as currently designed, the sale of MUN utility tokens does not pose a significant risk of implicating federal securities laws.", the order argued that its MUN tokens were actually "securities" because they are considered to be "investment contracts". The fact that the Howey test is currently the only reliable way for people planning an ICO to determine whether its token is deemed to be a "security" but the SEC can simply disagree with the "in-house" analysis implies that potential entrepreneurs could be more or less at the mercy of the SEC's decision if they don't register their tokens as securities or qualify for exemption. The unpredictable nature of the SEC ruling led us to exclude the United States from our analysis.

Policies on ICOs and Crytocoins

- Korea
- USA
- China
- Japan
- Europe
- East Asia

SEC Statement on Cryptocurrencies and ICOs

by SEC Chairman **Jay Clayton, Dec. 11, 2017**

The cryptocurrency and ICO markets have grown rapidly. These markets are local, national and international and include an ever-broadening range of products and participants. They also present investors and other market participants with many questions, some new and some old (but in a new form), including, to list just a few:

- Is the product legal? Is it subject to regulation, including rules designed to protect investors? Does the product comply with those rules?
- Is the offering legal? Are those offering the product licensed to do so?
- Are the trading markets fair? Can prices on those markets be manipulated? Can I sell when I want to?
- Are there substantial risks of theft or loss, including from hacking?

A number of concerns have been raised regarding the cryptocurrency and ICO markets, including that, as they are currently operating, there is substantially less investor protection than in our traditional securities markets, with correspondingly greater opportunities for fraud and manipulation.

Investors should understand that to date no initial coin offerings have been registered with the SEC. The SEC also has not to date approved for listing and trading any exchange-traded products (such as ETFs) holding cryptocurrencies or other assets related to cryptocurrencies.[2] **If any person today tells you otherwise, be especially wary.**

Advice to “main street” investors

<u>**Considerations for Main Street Investors**</u>

A number of concerns have been raised regarding the cryptocurrency and ICO markets, including that, as they are currently operating, there is substantially less investor protection than in our traditional securities markets, with correspondingly greater opportunities for fraud and manipulation.

Investors should understand that to date no initial coin offerings have been registered with the SEC. The SEC also has not to date approved for listing and trading any exchange-traded products (such as ETFs) holding cryptocurrencies or other assets related to cryptocurrencies.[2] **If any person today tells you otherwise, be especially wary.**

We have issued investor alerts, bulletins and statements on initial coin offerings and cryptocurrency-related investments, including with respect to the marketing of certain offerings and investments by celebrities and others.[3] Please take a moment to read them. **If you choose to invest in these**

“Advice to “main street investors

We have issued investor alerts, bulletins and statements on initial coin offerings and cryptocurrency-related investments, including with respect to the marketing of certain offerings and investments by celebrities and others.[3] Please take a moment to read them. **If you choose to invest in these products, please ask questions and demand clear answers.** A list of sample questions that may be helpful is attached.

As with any other type of potential investment, if a promoter guarantees returns, if an opportunity sounds too good to be true, or if you are pressured to act quickly, please exercise extreme caution and be aware of the risk that your investment may be lost.

Please also recognize that these markets span national borders and that significant trading may occur on systems and platforms outside the United States. Your invested funds may quickly travel overseas without your knowledge. As a result, risks can be amplified, including the risk that market regulators, such as the SEC, may not be able to effectively pursue bad actors or recover funds.

To learn more about these markets and their regulation, please read the “Additional Discussion of Cryptocurrencies, ICOs and Securities Regulation” section below.

"Warning" to Market Professionals
by SEC Chairman **Jay Clayton, Dec. 11, 2017**

Considerations for Market Professionals

I believe that initial coin offerings – whether they represent offerings of securities or not – can be effective ways for entrepreneurs and others to raise funding, including for innovative projects. However, any such activity that involves an offering of securities must be accompanied by the important disclosures, processes and other investor protections that our securities laws require. A change in the structure of a securities offering does not change the fundamental point that when a security is being offered, our securities laws must be followed.[4] Said another way, replacing a traditional corporate interest recorded in a central ledger with an enterprise interest recorded through a blockchain entry on a distributed ledger may change the form of the transaction, but it does not change the substance.

I urge market professionals, including securities lawyers, accountants and consultants, to read closely the investigative report we released earlier this year (the "*21(a) Report*")[5] and review our subsequent enforcement actions.[6] In the 21(a) Report, the Commission applied longstanding securities law principles to demonstrate that a particular token constituted an investment contract and therefore was a security under our federal securities laws. Specifically, we concluded that the token offering represented an investment of money in a common enterprise with a reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others.

"Warning" to Market Professionals

by SEC Chairman **Jay Clayton, Dec. 11, 2017**

Following the issuance of the 21(a) Report, certain market professionals have attempted to highlight utility characteristics of their proposed initial coin offerings in an effort to claim that their proposed tokens or coins are not securities. Many of these assertions appear to elevate form over substance. Merely calling a token a "utility" token or structuring it to provide some utility does not prevent the token from being a security. Tokens and offerings that incorporate features and marketing efforts that emphasize the potential for profits based on the entrepreneurial or managerial efforts of others continue to contain the hallmarks of a security under U.S. law. **On this and other points where the application of expertise and judgment is expected, I believe that gatekeepers and others, including securities lawyers, accountants and consultants, need to focus on their responsibilities.** I urge you to be guided by the principal motivation for our registration, offering process and disclosure requirements: investor protection and, in particular, the protection of our Main Street investors.

I also caution market participants against promoting or touting the offer and sale of coins without first determining whether the securities laws apply to those actions. **Selling securities generally requires a license, and experience shows that excessive touting in thinly traded and volatile markets can be an indicator of "scalping," "pump and dump" and other manipulations and frauds.** Similarly, I also caution those who operate systems and platforms that effect or facilitate transactions in these products that they may be operating unregistered exchanges or broker-dealers that are in violation of the Securities Exchange Act of 1934.

"Warning" to Market Professionals
by SEC Chairman **Jay Clayton, Dec. 11, 2017**

On cryptocurrencies, I want to emphasize two points. First, while there are cryptocurrencies that do not appear to be securities, simply calling something a "currency" or a currency-based product does not mean that it is not a security. Before launching a cryptocurrency or a product with its value tied to one or more cryptocurrencies, its promoters must either (1) be able to demonstrate that the currency or product is not a security or (2) comply with applicable registration and other requirements under our securities laws. Second, brokers, dealers and other market participants that allow for payments in cryptocurrencies, allow customers to purchase cryptocurrencies on margin, or otherwise use cryptocurrencies to facilitate securities transactions should exercise particular caution, including ensuring that their cryptocurrency activities are not undermining their anti-money laundering and know-your-customer obligations.[7] **As I have stated previously, these market participants should treat payments and other transactions made in cryptocurrency as if cash were being handed from one party to the other.**

Statement on Cryptocurrencies and ICOs

by SEC Chairman **Jay Clayton, Dec. 11, 2017**

Initial Coin Offerings. Coinciding with the substantial growth in cryptocurrencies, companies and individuals increasingly have been using initial coin offerings to raise capital for their businesses and projects. Typically these offerings involve the opportunity for individual investors to exchange currency such as U.S. dollars or cryptocurrencies in return for a digital asset labeled as a coin or token.

These offerings can take many different forms, and the rights and interests a coin is purported to provide the holder can vary widely. A key question for all ICO market participants: "Is the coin or token a security?" As securities law practitioners know well, the answer depends on the facts. For example, a token that represents a participation interest in a book-of-the-month club may not implicate our securities laws, and may well be an efficient way for the club's operators to fund the future acquisition of books and facilitate the distribution of those books to token holders. In contrast, many token offerings appear to have gone beyond this construct and are more analogous to interests in a yet-to-be-built publishing house with the authors, books and distribution networks all to come. It is especially troubling when the promoters of these offerings emphasize the secondary market trading potential of these tokens. Prospective purchasers are being sold on the potential for tokens to increase in value – with the ability to lock in those increases by reselling the tokens on a secondary market – or to otherwise profit from the tokens based on the efforts of others. These are key hallmarks of a security and a securities offering.

By and large, the structures of initial coin offerings that I have seen promoted involve the offer and sale of securities and directly implicate the securities registration requirements and other investor protection provisions of our federal securities laws. Generally speaking, these laws provide that investors deserve to know what they are investing in and the relevant risks involved.

Securities Act of 1933

Is "token" a security?

- Certificate of interest or participation in any profit-sharing agreement
- Investment contract
- Transferable shares

SECURITIES ACT OF 1933

[References in brackets [ ] are to title 15, United States Code]

[As Amended Through P.L. 114–94, Enacted December 4, 2015]

AN ACT To provide full and fair disclosure of the character of securities sold in interstate and foreign commerce and through the mails, and to prevent frauds in the sale thereof, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

TITLE I

SHORT TITLE

SECTION 1. [77a] This title may be cited as the "Securities Act of 1933".

DEFINITIONS

SEC. 2. [77b] (a) DEFINITIONS.—When used in this title, unless the context otherwise requires—

(1) The term "security" means any note, stock, treasury stock, security future, security-based swap, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a "security", or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.

Securities Act of 1933

- The Securities Act of 1933 has two basic objectives:
  1. require that investors receive financial and other significant information concerning securities being offered for public sale; and
  2. prohibit deceit, misrepresentations, and other fraud in the sale of securities.

- **See the full text of the Securities Act of 1933.**

- **Purpose of Registration**

- A primary means of accomplishing these goals is the disclosure of important financial information through the registration of securities. This information enables investors, not the government, to make informed judgments about whether to purchase a company's securities. While the SEC requires that the information provided be accurate, it does not guarantee it. Investors who purchase securities and suffer losses have important recovery rights if they can prove that there was incomplete or inaccurate disclosure of important information.

The Registration Process

- In general, securities sold in the U.S. must be registered. The registration forms companies file provide essential facts:
  - a description of the company's properties and business;
  - a description of the security to be offered for sale;
  - information about the management of the company; and
  - financial statements certified by independent accountants.
- Registration statements and prospectuses become public, subject to examination for compliance with disclosure requirements.
- Some exemptions from registration include:
  - private offerings to a limited number of persons or institutions;
  - offerings of limited size;
  - intrastate offerings; and
  - securities of municipal, state, and federal governments.

Securities Exchange Act of 1934

- With this Act, created the Securities and Exchange Commission.
  - Empowers the SEC with broad authority
  - Register, regulate, and oversee brokerage firms, transfer agents, and clearing agencies as well as self regulatory organizations (SROs).
  - NYSE, NASDAQ, and Chicago Board of Options are SROs.
  - The Financial Industry Regulatory Authority (FINRA) is also an SRO.

- The Act also identifies and prohibits certain types of conduct in the markets and provides the Commission with disciplinary powers over regulated entities and persons associated with them.

- The Act also empowers the SEC to require periodic reporting of information by companies with publicly traded securities.

- **See the full text of the Securities Exchange Act of 1934.**

SEC

Proxy Solicitations

- The Securities Exchange Act also governs the disclosure in materials used to solicit shareholders' votes in annual or special meetings held for the election of directors and the approval of other corporate action. This information, contained in **proxy materials**, must be filed with the Commission in advance of any solicitation to ensure compliance with the disclosure rules. Solicitations, whether by management or shareholder groups, must disclose all important facts concerning the issues on which holders are asked to vote.

Tender Offers

- The Securities Exchange Act requires disclosure of important information by anyone seeking to acquire more than 5 percent of a company's securities by direct purchase or tender offer. Such an offer often is extended in an effort to gain control of the company. As with the proxy rules, this allows shareholders to make informed decisions on these critical corporate events.

SEC

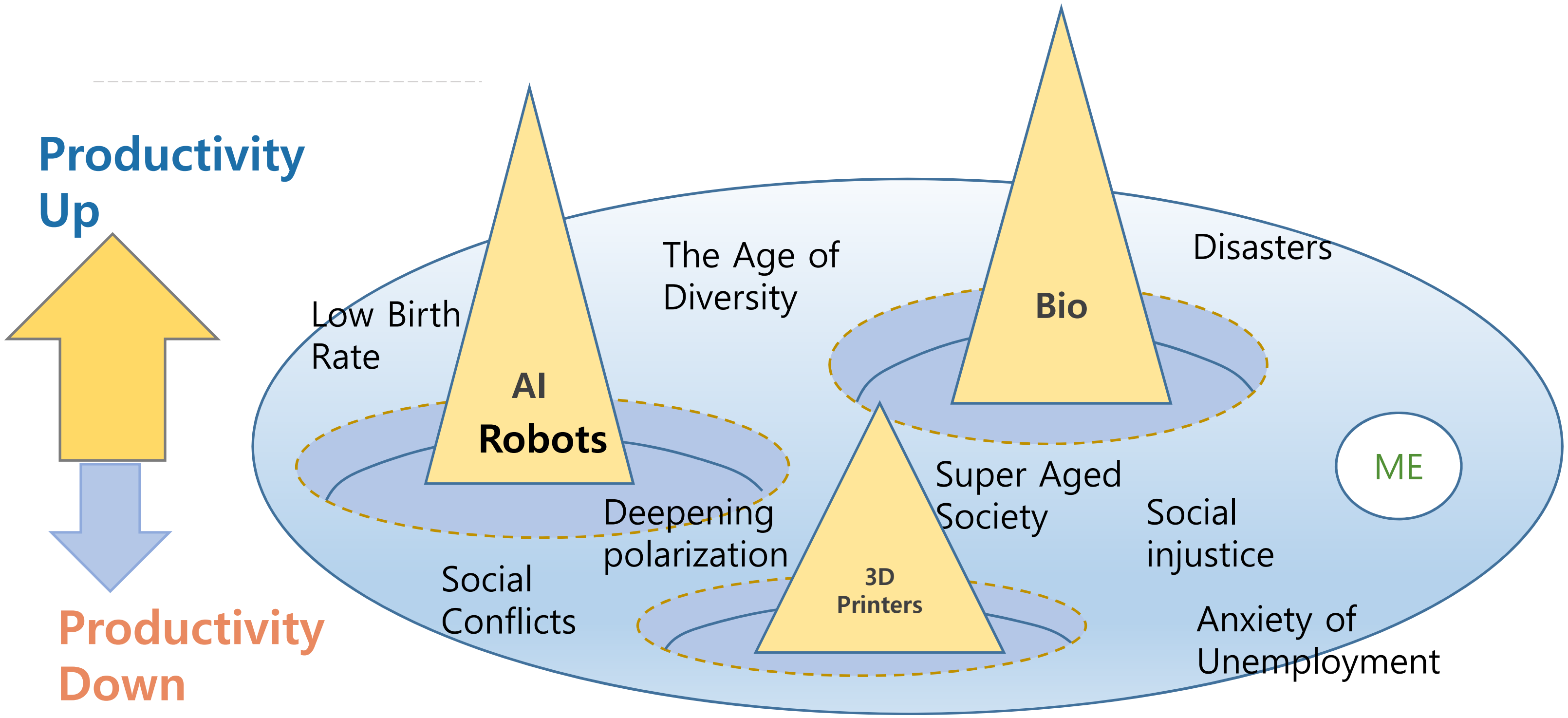
Insider Trading

- The securities laws broadly prohibit fraudulent activities of any kind in connection with the offer, purchase, or sale of securities. These provisions are the basis for many types of disciplinary actions, including actions against fraudulent insider trading. Insider trading is illegal when a person trades a security while in possession of material nonpublic information in violation of a duty to withhold the information or refrain from trading.

Registration of Exchanges, Associations, and Others

- The Act requires a variety of market participants to register with the Commission, including exchanges, brokers and dealers, transfer agents, and clearing agencies. Registration for these organizations involves filing disclosure documents that are updated on a regular basis.
- The exchanges and the Financial Industry Regulatory Authority (FINRA) are identified as self-regulatory organizations (SRO). SROs must create rules that allow for disciplining members for improper conduct and for establishing measures to ensure market integrity and investor protection. SRO proposed rules are subject to SEC review and published to solicit public comment. While many SRO proposed rules are effective upon filing, some are subject to SEC approval before they can go into effect.

Recall our first lecture, our motivation for this course!



Major gain for a few innovators, gain for people at large, huge loss for people who lost the job!

Can we store the proofs of our usual work within blockchain such as programs, copyright, honest work in work places, and get compensated later on?
Can we make the society more responsive and cooperative using cryto trust?

How to evaluate an ICO?

https://icowatchlist.com/education/history-and-evolution-of-icos

- Some critical factors to evaluate an ICO include:

  Business model: Identify the strong points and weak links of the business model. Does the company real-ly need an ICO with its own currency? How does the company integrate crypto token with its business model? Can you use the crypto token outside its ecosystem? Enquire from people who understand the technology and discuss these points with them.

- **Project team:** Find out every single detail you can about the development team and the advisory board. Look for ICOs that have teams with proven track record in the crypto-asset and blockchain industry.
- **Community feedback:** ICOs are announced on community forums and the marketing part kicks in after-ward. Check the community feedback for the project and how the project team responds to it. Visit the Reddit, Twitter or Facebook pages of the projects. Be aware of paid reviews or bounty posts that pay participants to spread positive information about the project.
- **Current product state:** ICOs that have a product near completion or halfway down the development track have higher chances. Find out the current project stage and whether the development team is on schedule or not.
- **VC involvement:** The involvement of a big crypto VC is a positive sign. Find out if the company has VC support or better if they have a VC on board.
- **Market niche:** How intense is the competition in the selected market niche? Research on any previous businesses working in the same industry, and match their fundamentals with what the company is work-ing on.

How do you spot an ICO scam?

https://icowatchlist.com/education/history-and-evolution-of-icos

- The current ICO frenzy has attracted unwanted elements in the cryptocurrency ecosystem. With an ICO happening every day, it's imperative to be able to differentiate between a good opportunity and a scam.

  Lack of open team profiles: If an ICO doesn't provide social profiles of the team members, it's quite likely to be a scam. Try to find a team that has at least one member having a successful crypto project under his/her belt.

- **Compromised or missing escrow:** Absence of an escrow account is the biggest red flag to look out for. Similarly, if an escrow releases 100% funds to the project team after ICO, it's a bad escrow, and should be considered as a red flag. Fund releasing should happen gradually such as 20% after token distribution, 40% after beta release, and similar milestones.

- **No technical details in the whitepaper:** If an ICO promises to disrupt an established industry without providing any technical or operational details, it qualifies as a scam. Good whitepapers have charts, calculations, specifications, and even code at times.

- **Unrealistic goals:** If an ICO makes bold claims without an economic plan or roadmap to support it, it's best to avoid investing. Further, even if the team has offered a roadmap, you have to do your own research and judge the feasibility of the project.

- **Missing code repository:** This is another sure shot method to spotting an ICO scam. If the company is unwilling to release its code to public repositories such as Github, avoid the ICO altogether.

How to set up your own ICO?

https://icowatchlist.com/education/history-and-evolution-of-icos

- To be a successful ICO, a step-by-step guide to launch an ICO is in place today.
- **Should you conduct an ICO for your business?**
- **Define business goals and benefits for the contributors**
- **Focus on an experienced team**
- **Prepare a roadmap**
- **Investor security**
- **Get the word out**
- **Established ICO platforms:** Choose an ICO platform to launch your project, i.e., Bitcoin Core or Ethereum.

Summary

- ICO is a new instrument!
- But be careful!
- Read Jay Clayton’s message very carefully!
- Midterm

Midterm

- Bring a Scientific calculator or smart phone.
- Open book and open note.
- There will be four problem groups from lecture notes:
  - Can you size up the bitcoin network given a few parameters?
  - Why and how PoW work?
  - Do you understand the innovation bitcoin has brought?
  - Why aspects of the bitcoin network do you think have helped brought **trust**?
  - What is the meaning of "brokering trust", what is the shift occurring today in the society, and why is it important to foster more such changes in the society?
  - How do you think we can solve the PoW monopoly problem?
  - What is the problem with PoS, Po Activity, and Po Publication, etc.?
  - Can you discern the difference between private vs. public blockchain?
  - Do you understand the process of a transaction in bitcoin trading?
  - What is bitcoin? What is blockchain?
  - Blockchain, 4^{th} industrial era, sharing economy, unbundling of big companies, how do they go together?
  - Know materials covered in lecture notes. And, reference materials will be of help!
- Answers given with reasons will get good credit!
- Answers shall be given in English.