

ICOs: You Get What You Pay For

This is a guest article by Demelza Hays, M.Sc, Research & Fund Management, Incrementum AG.

Initial coin offerings (ICOs) are commonly used as a **cheap and fast way to raise capital compared to donation-based crowdfunding**, whereby the tokens do not convey ownership in the token issuing company. Instead, token offerings that do convey ownership are investment contracts and therefore can be defined as equity token offerings (ETO), which is a subcategory of security token offerings (STOs). **STO coins can represent a multitude of different investment contracts including equity, debt, profit-sharing, and voting rights.** This article describes the variants of ICOs such as Security Token Offerings (STOs), Digital Security Offerings (DSOs), Equity Token Offerings (ETOs) and Debt Token Offerings (DTOs).

Buyer beware: ICOs are not synonymous with utility tokens even though many firms doing ICOs claim their tokens are utility tokens and not securities. There are many fundamental problems with the concepts of both “initial coin offerings” and “utility tokens” including the fact that many ICO tokens have no direct link to the financial success of the issuing company and retail investors do not often understanding what the token represents. Also, ICOs that actually offer investment contracts but do not comply with security regulations such as having their prospectus approved by financial market authorities or filing for an exemption are actually illegal security offerings. Regarding the theoretical problem with utility tokens, currency risk in the purchasing power of the token makes it unsuitable for many of the applications that it is designed for.

Crowdfunding

Sole proprietorships make up 72% of U.S. firms but only account for 4% of revenue while corporations make up 18% of firms but account for 83% of revenue.¹ One reason for this is that the shares of corporations are easy to trade. Unlike a sole proprietorship, partnership, or LLC, anyone can be a shareholder of a corporation without any knowledge or expertise of the company they are running. This enables corporations to raise substantial amounts of money on capital markets.

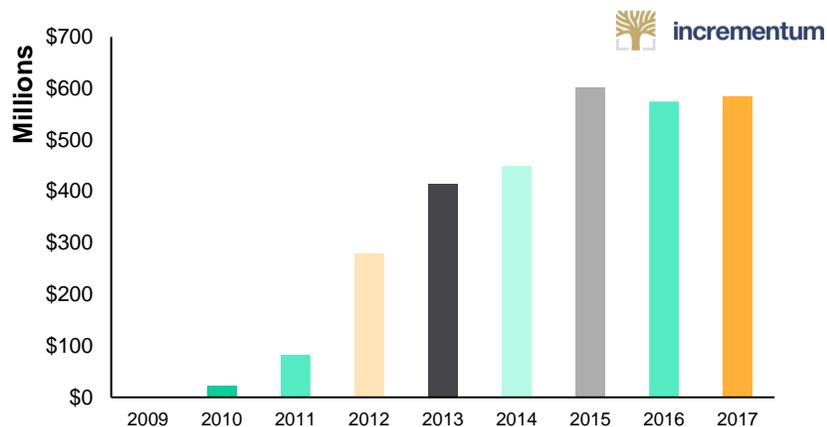
Crowdfunding, private equity, initial coin offerings (ICOs), and security token offerings (STOs) are just some of the ways investors are providing capital to small and medium-size enterprises (SMEs). Although the concept of crowdfunding goes back to 18th century book sales, the modern conception of crowdfunding is an internet phenomenon. **Crowdfunding typically refers to entrepreneurs raising small amounts of capital from a large pool of investors online.**² There are several types of crowdfunding but **the two relevant are donation-based fundraising and equity.**

¹ Berk, J. & DeMarzo, P.: "Corporate Finance" 4th Global Edition, 2017, Pearson.

²"[Definition of Crowdfunding](http://www.merriam-webster.com)". *www.merriam-webster.com*. Retrieved 2019-01-23.

Donation-based equity crowdfunding is where investors give or “donate” capital to a startup in exchange for a future good or service or just to support the idea. Popular sites for donation-based crowdfunding include Kickstarter that has raised over \$3.7 billion and Indiegogo, which has raised over \$1 billion. In contrast, equity crowdfunding is the crowd-sale of securities such as [equity, debt, membership units, and convertible units](#). Equity crowdfunding has raised approximately \$500 million since its inception in the U.S. in 2015.³

Capital Raised on Kickstarter



Source: Kickstarter, Incrementum AG

The annual growth of global interest in crowdfunding prompted many countries to relax their security offering regulations for crowdfunding campaigns. Registration and prospectus requirements carry heavy compliance costs that hinder a small company’s ability to access regulated capital markets. Bagley and Dauchy (2003) estimated compliance costs for IPO’s to be above \$1 million because of legal, underwriter, SEC filing fees, state securities filing fees, stock exchange or OTC registration fees, accounting fees and an increased D&O insurance premium.⁴ The 2012 JOBS Act in the US enabled non-accredited investors to invest in equity and bonds there are exempt from normal security regulations.⁵ In 2015, Austria reformed their Alternativfinanzierungsgesetz (AltFG) to allow a maximum funding of €5 million without a prospectus, and Germany’s Kleinanlegerschutzgesetz’s increased the maximum to €2.5 million without a prospectus.⁶ The various exemptions to security laws were harmonized in the EU under Directive 2010/73/EU⁷ and as Christian Messier discussed in the latest edition of the [Crypto](#)

³ Marks, Howard. How Crowdfunding Is Disrupting VCs. 2018. Forbes.

⁴ Bagley CE, Dauchy CE. 2003. *The Entrepreneur’s Guide to Business Law*. Thomson Learning: Ontario.

⁵ Jumpstart Our Business Startups Act. 2012. Retrieved from <https://www.govinfo.gov/content/pkg/BILLS-112hr3606enr/pdf/BILLS-112hr3606enr.pdf>.

⁶ Hornuf, L. & Schwenbacher, A. *Small Bus Econ* (2017) 49: 579. <https://doi.org/10.1007/s11187-017-9839-9>

⁷ DIRECTIVE 2010/73/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010. Official Journal of the European Union. Retrieved from <https://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:327:0001:0012:EN:PDF>

[Research Report](#), these laws are expected to be relaxed even further to €8 million in the E.U. and 2.5 million CHF in Switzerland.

Prior to 2012, accredited investors such as angels and VCs dominated the startup scene. **Think of Palo Alto/San Francisco and the geographic concentration of wealth that this regulation created.** In the U.S. accredited investors are high net worth individuals with a net worth of over \$1 million excluding primary residence or an annual income of \$200 thousand for the past two years.⁸ Switzerland has a similar concept called Qualified Investors. According to Art. 10 Para. 3 of the Swiss Federal Collective Investment Schemes Act (CISA), a qualified investor must be a high net worth individual with at least 2 million CHF net assets excluding real estate.⁹ In both countries, regulated financial intermediaries such as banks, securities dealers, and fund managers are considered accredited investors as well as insurance companies, public entities, pension funds, and companies with professional treasury departments.

Table 1: Overview of ICOs, Crowdfunds, STOs, and IPOs

	ICO	Donation Crowdfunding	Equity Crowdfunding	STO/DSO	IPO
Investment Requirements	Anyone with internet and smart phone or computer	Over 18 years old. Must have bank account. In the US, unaccredited investors with less than \$100,000 per year, can only invest \$2,000 or 5 percent of their annual income.	Over 18 years old. Must have bank account. In the US, unaccredited investors with less than \$100,000 per year, can only invest \$2,000 or 5 percent of their annual income.	Accredited investor	Accredited investor
Issue Criteria	Anyone with internet, smart phone or computer	Over 18 years of old, permanent resident of an eligible countries, bank account, government-issued ID, major credit or debit card	Disclosure regulations: Form C submitted to the SEC along with the company's finances. After the sale, Form C-AR must be posted on the company's website 120 days after the end of next fiscal year.	Register, streamlined prospectus approval	Register, prospectus approval, underwriters, stock exchange registration, directors and officers liability insurance
Advantages	Anonymity; No barriers to entry; network effects	Network effects. Lower barriers to entry than a security offering.	Conveys ownership. Low legal costs. \$1,500 to file Form C with the SEC and \$1,500 for an escrow account, a requirement to host a campaign.	Conveys ownership	Conveys ownership
Disadvantages	Does not convey ownership often.	Does not convey ownership. Funding platforms charge around 5% of the	Funding platforms charge between 7% and 15% of the equity crowdfunding raise as fees.	Barriers to entry. Legal and regulatory costs. Nowhere to trade STOs yet.	Barriers to entry. Legal and regulatory costs.

⁸ Title 17: Commodity and Securities Exchanges PART 230—GENERAL RULES AND REGULATIONS, SECURITIES ACT OF 1933. Retrieved from <https://www.ecfr.gov/cgibin/retrieveECFR?gp=&SID=8edfd12967d69c024485029d968ee737&r=SECTION&n=17y3.0.1.1.12.0.46.176>

⁹ Circular of the Swiss Financial Market Supervisory Authority FINMA about Public advertising within in the context of the Federal Act of Investment Funds. Retrieved from <https://www.swissfunddata.ch/sfdpub/en/group/info>

		equity crowdfunding raise as fees.			
Example	Bancor, Bitshares	Star Citizen	Geostellar, Napa Valley Distillery	Hydrominer	Facebook
Platform	Ethereum, EOS, TRON	Kickstarter, Indiegogo, TILT	Republic, First Democracy VC	tZERO, Harbor, SIX (2020?)	NASDAQ, NYSE, SIX, DAX

However, crowdfunding isn't free either. Darren Westlake estimated that crowdfunding prospectus approvals cost between £20,000 and £100,000 in the UK.¹⁰ Fees on crowdfunding platforms are approximately 5% of the sale proceeds.¹¹ This is in addition to a small filing fee of \$1,500 with the SEC.

ICOs

ICOs are not revolutionary. They are an evolution of the crowdfunding model. Similar to donation-based crowdfunding, ICOs typically do not give ownership shares in the company. They enable anyone, anywhere, (except the U.S., China, Bangladesh, Nepal, Macedonia, Bolivia, Ecuador, Pakistan, Algeria, and Morocco) to raise capital without expensive lawyers and investment banks.¹²

Nicknamed Token Generation Event (TGE) by the Swiss law group, MME, **the process of creating tokens and distributing them to users in return for a network's digital token is called an initial coin offering (ICO).** Catalini & Gans (2018) explain that an ICO token transitions into a medium of exchange once the code is programmed and people are using the DLT-based network.

"...through an ICO, a venture offers a stock of specialized crypto tokens for sale with the promise that those tokens will operate as the medium of exchange when accessing services on a digital platform developed by the venture."¹³

Although, the most comprehensive and appropriate definition up to date could be the one of Adhami et al., (2018):

"Initial Coin Offerings (ICOs) can be defined as open calls for funding promoted by organizations, companies, and entrepreneurs to raise money through cryptocurrencies, in exchange for a token that can be sold on the Internet or used in the future to obtain products or services and, at times, profit."¹⁴

¹⁰ Collins, L. and Pierrakis, Y.2012. The venture crowd crowdfunding equity investment into business.

¹¹ Retrieved from <https://www.kickstarter.com/help/fees>

¹² Retrieved from <https://www.bitcoinmarketjournal.com/ico-regulations/>

¹³ Catalini, C., & Gans, J. (2018). Initial Coin Offerings and the Value of Crypto Tokens. Cambridge, MA: National Bureau of Economic Research. Retrieved from <http://ide.mit.edu/sites/default/files/publications/SSRN-id3137213.pdf>

¹⁴ Adhami, S., Giudici, G., & Martinazzi, S. (2018). Why do businesses go crypto? An empirical analysis of initial coin offerings. *Journal of Economics and Business*. Advance online Publication.

However, ICOs are not synonymous with utility tokens. From the Merriam-Webster dictionary, a utility coin is a distinct type of cryptoasset:

noun

a digital token of [cryptocurrency](#) that is issued in order to fund development of the cryptocurrency and that can be later used to purchase a good or service offered by the issuer of the cryptocurrency.

However, the Merriam Webster definition is false. The definition of utility coin does not have anything to do with how the capital to build the coin was raised (either by ICO, IPO, self-funding, etc.). Instead, the Swiss regulator FINMA has a better definition,

“Utility tokens are tokens which are intended to provide digital access to an application or service.”

For example, the native Ethereum blockchain coin, Ether (ETH), is considered a utility token. Utility tokens are supposed to be tender for goods and services; however, a medium of exchange should be stable not volatile. [As Adrian Jacob Brouwer pointed out](#), speculation on the price of a utility token is not beneficial to holders of the utility token. If they expect to actually use the token as a medium of exchange to buy a good or service, then volatility actually decreases the utility of the token. **The appreciation in price that utility token investors seek is precisely what makes the utility token unable to achieve the network adoption that could actually lead to a price increase.** Instead, the stablecoin model is more aptly suited for tokens that are used to buy goods and services combined with an STO token that gives investors ownership in the company.

Many ICO issuers claim that their token is a utility token instead of an investment contract because they want to circumvent security regulations. However, utility tokens can be considered securities in the US following the criteria of the Howey Test. Subsequently, many regulators have deemed ICOs to be unregistered security offerings because they serve the purpose of an investment contract.¹⁵ In addition to potentially being unregistered securities, many critics claim that between 78% and 95% of all initial coin offerings are doomed to fail or are scams.^{16,17} To complicate matters further, if initial coin offerings and some cryptocurrencies are unregistered securities, then that means that exchanges offering unregistered securities are violating securities law because exchanges must be licensed to list and store securities. For this reason, the two largest exchanges in the U.S., Coinbase and Gemini, refuse to list coins such as XRP that fail the Howey Test.¹⁸

¹⁵ Retrieved from <https://www.sec.gov/news/speech/speech-clayton-120618>

¹⁶ Retrieved from https://research.bloomberg.com/pub/res/d28giW28tf6G7T_Wr77aU0gDgFQ

¹⁷ Retrieved from <https://thefinancetimes.com/ico-fraud-and-how-to-avoid-it/>

¹⁸ Retrieved from <https://bitcoinist.com/heres-the-real-reason-why-coinbase-gemini-wont-list-ripple-xrp/>

STOs

To recap the section on ICOs and utility coins, this article is proposing boundaries for the definitions of these various terms. To reduce semantic arguments, this article is claiming that an ICO can only be used for raising capital for building cryptoassets that do not resemble investment contracts or securities. This includes utility coin or payment coins. Once the cryptoasset begins to resemble a security, the capital raising method becomes a security token offering.

Since ICOs have enabled inexperienced entrepreneurs to raise billions of dollars on whitepapers and websites alone without proper disclosure, the market is moving towards regulated Security Token Offerings (STOs). Nicknamed Digital Security Offering (DSO) by the Swiss law group, FRORIEP, TokenMarket's Jay Pazos defines a security token as,

"...digital representations of company shares, and their holders are collectively the owners of the company."

However, Pazos' definition of an STO is too narrow. **An STO could represent a multitude of different investment contracts including equity (ETO), debt (DTO), revenue-sharing, and voting rights.** An asset can provide two main types of financial return: annual yield in the form of dividends (stocks), interest payments (bonds), or rent (real estate) or capital gains in the form of the asset increasing in value over time. For example, [La Pradera](#) is a Swiss compliant, asset-backed and revenue-sharing security token that entitles investors to a portion of the annual revenue from an organic cattle farm in Bolivia. However, each token does not offer ownership of the farm. In contrast, the [Swiss crypto-bank start-up Mt Pelerin](#) issues tokens that are actual equity ownership in the company. It is very important to consider that an STO could also be a cryptobond offering because the global bond market is at approximately double the size of the global equity market. Also, firms such as Overstock.com have already experimented with issuing bonds using the blockchain technology. Issuance of tokens that represent bonds can be referred to as a Debt Token Offering (DTO).

The term that best fits Pazos' definition is Equity Token Offering (ETO). **Overall, ETOs are evolutionary, not revolutionary. They are just an evolution of the IPO model applied to startups and growth companies.** As fellow CFC panelist, [Tatiana Koffman](#), explained,

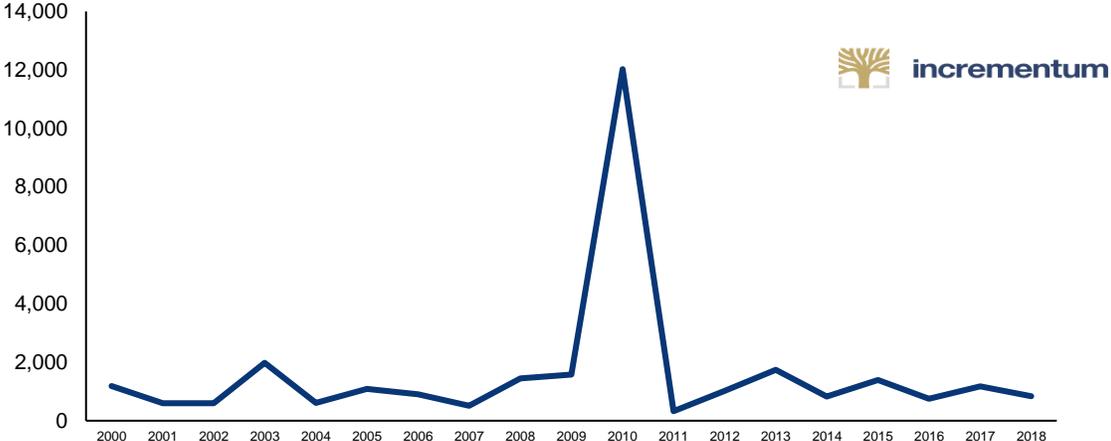
"Advantages of tokenization include fractionalization of larger assets, increased liquidity, lower issuance fees, and greater market efficiency. However, the greatest benefit that security tokens provide an issuer is access to a global pool of capital."

ETOs are meant to be cheaper and faster IPOs. The tokenization of shares can be thought of as leveling the playing field for small and medium size businesses on the capital market. Similar to

the benefits of forming a corporation, anyone can be a token holder and they do not need to have knowledge of the business or management. Imagine a small fabric shop in Pfäffikon could issue tokens that represent ownership in their company in order to raise capital. Smart contracts enable many different agreements to be programmed into the token. For example, token issuers can promise to pay out dividends or to pay out the residual value of the business in the case of bankruptcy. Other token arrangements include voting rights, such as MakerDao's MKR token. Tokens can also promise payouts to investors if the company gets bought or goes to IPO.

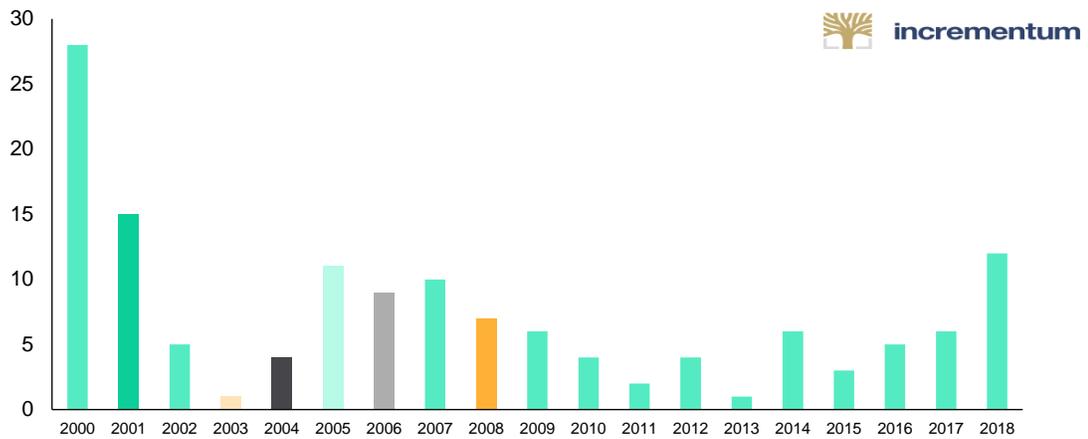
Since 2000, 139 companies have gone to IPO on the Swiss stock market (SIX). The average valuation of firms that went to IPO on the SIX was 1.6 billion CHF between 2000 and 2018. The idea of an STO would be to lower the cost and time required for a firm to make a public offering of ownership shares so that firms with lower valuations can access the capital market too.

Average Annual Market Capitalization of IPO Companies on SIX 2000 - 2018 in Millions



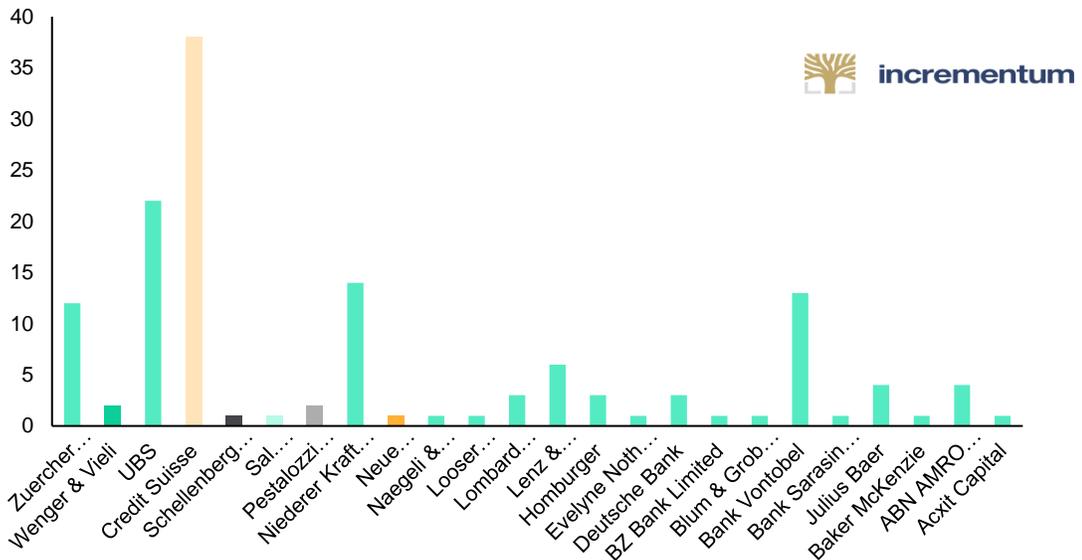
Source: SIX, Incrementum AG

Annual Number of IPOs on SIX



Source: SIX, Incrementum AG

Number of IPOs per Intermediary on SIX 2000 - 2018



Source: SIX, Incrementum AG

Also, ETOs and DTOs cannot increase liquidity for SMEs as Koffman explains because there are no licensed exchanges that can legally trade ETOs. **In the US, STOs that file for exemption from security regulation with a Reg S or Reg D lose their exemption if they are traded on an unregistered alternative trading system such as an unlicensed crypto exchange.** Until shareholders can trade ETO tokens on an exchange, they are effectively the same as illiquid VC investments. The SIX exchange and companies in the US such as Harbor and tZERO are working on private distributed ledgers that will enable natively issued tokens.

The original idea of issuing stocks on a blockchain would be to have more transparency regarding stock reserves. 75% of Goldman Sach's prime broker revenue comes from security lending.¹⁹ The t+3 regulation that gives shorters three days to return borrowed stocks has led to naked shorting whereby more shares are lent out to traders than actually exist. Review the Dole Corporation case where they issued 36,793,758 shares on the stock market, but 49,164,415 shares were actually traded. Fractional reserves of Dole stock led to a 33% increase in Dole shares on the market.²⁰ Clearing houses such as the DTCC in the U.S. and the SIX's SWX in Switzerland hold fractional reserves of stocks in order to financially profit from the rehypothecation of their client's collateral.

However, natively issued stocks on a blockchain could allow traders to circumvent KYC/AML regulations. Also, large institutions cannot legally be the custodian of the securities in their portfolio because of AIFMD regulation. Therefore, exchanges like SIX are opting for the next best option: handle custody and settlement of stocks while issuing tokens 1-to-1 on a private distributed ledger. This is effectively a reverse ETF. Exchanges may make use of zero knowledge proofs to prove reserves if retail investors care enough about rehypothecation.

It's also not clear that the Swiss law enables a token to represent ownership of a company. The December 2018 DLT report by the Swiss Federal Council (Bundesrat) is quite clear that linking a token to a physical good or a claim is possible (on page 50). However, this means that legally, there is a distinction between tokens that represent physical goods (such as a Rolex) and tokens that represent claims (such debt or a non-physical share certificate). Regarding the question of transferability of claims via tokens, the Bundesrat is cautious and says it is unclear – since publication, however, more and more lawyers are supporting the view that for the transfer of a claim by transferring a token is possible without signature (pg 61). Overall, more clarity is needed on the legal status of the ability to transfer ownership rights of assets outside of a DLT using a DLT coin or token.

Conclusion

The volatility of utility tokens issued during ICOs makes utility tokens poor mediums of exchange for goods and services. The price of utility tokens is often completely unrelated to the financial success of the company. Currently, there are arguably no examples of successful utility tokens or coins except for distributed ledger platforms that enable ICO issuance such as Ethereum and EOS;

¹⁹Retrieved from <https://www.youtube.com/watch?v=COQvMsbb-Cw&t=1112s>

²⁰ Retrieved from <https://www.bloomberg.com/opinion/articles/2017-02-17/dole-food-had-too-many-shares>

however, ICO tokens that offering an investment contract is an unregistered security offering, which is illegal.

This article is proposing distinct definitions for terms such as ICO, STO, ETO, and DTO. To reduce semantic arguments, this article is claiming that an ICO can only be used for raising capital for building cryptoassets that do not resemble investment contracts or securities. This includes utility coin or payment coins. Once the cryptoasset begins to resemble a security, the capital raising method becomes a security token offering. Unlike ICOs and donation-based crowdfunding, STOs, IPOs, and equity crowdfunding give investors skin in the game. However, STOs, IPOs, and equity crowdfunding have barriers to entry including compliance costs for issuers and minimum wealth levels for investors. Currently, there is no official listing of all of the STOs in Switzerland, Germany, Austria, and Liechtenstein. There is also no exchange that is officially licensed to trade security token offerings or digital securities offerings. More legal clarity on the ability for a digital token to represent ownership in a company is needed and more legal clarity on the functional equivalence of signing a transaction with a private key with a physical signature is needed.

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