

INTRODUCTION TO CRYPTO ASSETS AND ICOS



INTRODUCTION

The recent wave of new crypto asset issuance has been sweeping the start-up fundraising world. There are several ways for an entity to participate in this new wave:

- Raising funds through an ICO (initial coin offering)
- Issuing crypto assets
- Investing in crypto assets.

If you are considering one of these activities, you need to familiarise yourself with crypto assets, the ICO process and the regulatory environment.

Crypto assets were introduced less than a decade ago, first in the form of cryptocurrencies and then they rapidly expanded to other categories as new platforms emerged. Usually, a crypto asset refers to:

- A cryptocurrency with decentralised issuance and transactions
- A unit of value, issued into a decentralised system and secured by either someone or something; it only physically exists in the form of registry entries on the blockchain
- A unit of value that is both issued and validated by the same organisation, yet not backed up by anything on the blockchain.

Whereas Bitcoin is an open-source, decentralised cryptocurrency, (i.e. not issued by one authority), most of the recent crypto assets are issued by one centralised authority (i.e. an entrepreneur) on an existing or new blockchain open source platform, and their primary purpose is to raise funds for future development of a product or service.

Instead of approaching banks, venture capitalists or even classic crowdfunding websites, a growing number of entrepreneurs issue a crypto asset to the public in return for their funds. They use the blockchain as a vehicle to attract investors even though their ideas, services or products may or may not be directly connected to the blockchain technology.

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BACKGROUND ON CRYPTO ASSETS AND ICOS

UNDERSTANDING THE TYPES OF CRYPTO ASSETS

Blockchain¹ technology facilitated the emergence of a new kind of asset – crypto assets, which are digital assets recorded on a distributed ledger. They use asymmetric cryptography² that secures its transactions, to control the creation of additional units and to verify the transfer of assets. The decentralised control of each crypto asset works through a blockchain technology, a distributed digital ledger in which transactions are recorded chronologically and publicly (i.e. public transaction database).

Cryptocurrencies, such as Bitcoin and Litecoin, constitute the earliest and best-known examples of crypto assets, but the space continues to grow and has evolved into various categories of crypto assets. Crypto assets are mostly stored in a token compatible digital wallet (ERC-20³ standard). Common types of such wallets are desktop wallets, hardware wallets and mobile wallets.

Ethereum platform

The blockchain infrastructure that supports Bitcoin is limited to simple logic since it is specially designed as a currency and payment system. Introduction of the Ethereum blockchain-based platform in 2015 simplified the process of generating crypto assets by introducing the 'token', a representation of a particular asset or utility that physically exist in the form of registry entries on the blockchain which enables the terms and functionality of the crypto assets to be defined in a smart contract. A smart contract is a computer code software that automatically executes transactions (e.g., exchange of money, property, shares or anything of value) and/or enforces agreements based on the fulfilment of the terms of an agreement, although some parts may require human input and control.

Payment to miners that run the smart contract operations (i.e. build and maintain the blockchain ledger) comes in the form of a crypto currency called Ether⁴.

The Ethereum platform is currently the leading ICO platform with more than 75% of such projects developed on this platform. As a result, the Ethereum network is becoming overloaded and the growing demand raises the cost of Ether and the cost of running ICOs.

You may encounter one or more of the following crypto assets:

¹ A blockchain is a digitised, decentralised, public ledger of all cryptocurrency or crypto assets transactions. Constantly growing as 'completed' blocks (the most recent transactions) are recorded and added to it in chronological order. It allows market participants to keep track of digital currency transactions without central recordkeeping.

² Asymmetric cryptography uses public and private keys to encrypt and decrypt data. The keys are large strings paired together but are not identical (asymmetric). One key in the pair can be shared with everyone; it is called the public key. The other key in the pair is kept secret; it is called the private key. Either of the keys can be used to encrypt a message; the opposite key from the one used to encrypt the message is used for decryption.

³ ERC-20 is a technical standard used for smart contracts on the Ethereum blockchain for implementing tokens. It defines a common list of rules that an Ethereum token has to implement, giving developers the ability to program how new tokens will function within the Ethereum ecosystem. This token protocol became popular with crowdfunding companies working on initial coin offerings.

⁴ 60 million ether created to contributors of the presale and additional issuance of ether is capped at 18 million ether per year. Five ethers are created every block (roughly 15 seconds) to the miner of the block.

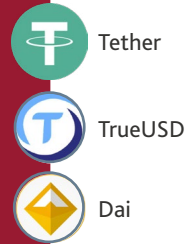
CRYPTOCURRENCIES (PAYMENT TOKENS)

Cryptocurrencies (synonymous with payment tokens) are tokens which are intended to be used, now or in the future, as a means of payment for acquiring goods or services or as a means of money or value transfer.



CRYPTO-FIAT CURRENCIES / STABLE COIN PAYMENT TOKENS

Crypto-fiat currencies or stable coins are meant to hold stable values. It is a "price-stable cryptocurrency." Each stable coin token has a unique mechanism but is based on a similar concept. They hold collateral of some type and manage the supply to help incentivise the market to trade the coin for no more or less than \$1. For some, like Tether or TrueUSD, the concept is to hold actual dollars in reserve that are redeemable for the token. For others, like Dai, they hold crypto assets in reserve and have a lending system.



UTILITY TOKEN

A utility token is a centralised issued token which intends to provide its holder with future access to an application or service using a blockchain-based infrastructure.



SECURITY TOKEN

A security token is a centralised issued token which represents assets such as a debt or equity claim on the issuer. Security tokens promise, for example, a share in future company earnings or future capital flows. In terms of their economic function, these security tokens are analogous to equities, bonds or derivatives.

* Many utility tokens are considered to be a security token, since their main purpose is to fund their activities.

NATURAL ASSET TOKEN

A natural asset token is a centralised issued token backed by a physical asset in the real world, (i.e. gold, oil, natural gas), or frontier markets.



CRYPTO-COLLECTIBLE TOKEN

A crypto-collectible token is a cryptographically unique, non-interchangeable digital asset. Unlike cryptocurrencies, which require all tokens to be identical, each crypto-collectible token is unique or limited in quantity. Typically, crypto-collectibles are visualised as real-life objects such as pets or avatars. Each token has variations in specific attributes and there are limits to the number of tokens that can be generated.



The above token classifications are not mutually exclusive; for example, security and utility tokens can also be classified as payment tokens (referred to as hybrid tokens), while in other cases, the token's economic nature may change in the future.

WHAT IS AN ICO OR TOKEN SALE?

An ICO is similar in concept to an IPO (i.e. an initial public offering) of a company's shares on the stock exchange. An ICO is the issuance of new crypto assets, mostly in a format of tokens recorded on a distributed ledger (primarily on the Ethereum platform). It is issued in a limited sale period, consists of a predefined number of tokens or crypto assets and is released by one organiser to the public typically in exchange for major cryptocurrencies (mainly Bitcoin and Ether). To participate, the investors register at the organiser's website, in certain cases answer anti-money laundering (AML) questions, submit the sending wallet address and the token receiving wallet address, and agree to the terms and conditions. In return, at the end of the sale period, they receive a quantity of crypto assets mostly in a format of tokens which are created and stored in a decentralised form either on a private or public blockchain created explicitly for the ICO or through a smart contract on a pre-existing blockchain (e.g. Ethereum platform).

There is similarity in most ICO processes yet there are differences in the crypto asset attributes such as:

- Tokens might be already put into circulation at the point of fundraising
- Investors are offered only the prospect that they will receive tokens at some point in the future and the tokens and/or the underlying blockchain remain to be developed
- Investors receive tokens which entitle them to acquire other different tokens later.

The ICO has a predefined fundraising goal (like crowdfunding). It usually begins with a limited presale period with a discounted price and later continues with an official campaign. Active ICOs are typically registered on a dedicated ICO website which exposes them to potential investors. Tokens or cryptocurrencies issued in a successful ICO can register for trading on a trading platform or be transferred from one wallet to another. The organiser of an ICO that did not reach the predefined market cap in most cases refunds its investors.

As the number of ICOs in the market increases, it may affect the timeline for a particular ICO. For example, some companies may postpone their token sale or may launch a longer marketing campaign. An efficient and professional marketing campaign is a crucial success factor for an ICO. As investors become more experienced, organisers are finding that selling a project in an early or prototype stage becomes challenging.



WHAT IS AN ICO WHITE PAPER?

The main sources of information supporting investors' decision whether to participate in the ICO is set out in a 'white paper' published by the ICO organiser. Among other considerations, the white paper sets out the technical details of the token functionality and explain the value propositions of the system they underpin.

A white paper should include the following:

- A persuasive rationale between the project and the token, including the relevant market context
- Specific steps and milestones
- Sufficient technical explanation of the key features and ecosystem
- The key contingencies, including risks and dependencies, and explain how they are mitigated
- The key team members involved and information about the organiser
- Appropriate language that makes it clear which parts of the project are conceptual and which parts have already been developed
- A clear governance mindset.

COSTS OF AN ICO AND FINANCING THE ICO PROCESS

As competition grows, average ICO costs to its organiser rapidly increase and may reach hundreds of thousands of dollars. Consequently, ICO costs become a barrier to many potential blockchain developers and ICO organisers. The stake in marketing expenses increases as they become a crucial success factor since organisers tend to outsource these activities to professional marketing agencies with a history of successful ICO marketing.

In addition to marketing expenses, the following expenses may also be incurred in an ICO (the list below is not complete):

- Incorporation and bank fees
- Legal and financial consulting fees
- Website development expenses
- Infrastructure and communication expenses
- Platform development expenses
- Salaries
- Expenses relating to operational activities
- Online registration and ICO listing websites fees
- Smart contract development expenses
- Security expenses.

Financing the ICO process in most cases requires the organiser to invest their own resources, engage investors, receive loans from a bank or allocate several tokens or coins to employees, partners, investors and other service providers.

FUNDING AMOUNT

The ICO organiser defines its target funding goals in term of soft cap and hard cap⁵ based on a business plan. According to 2018

5 The hard cap of an ICO means the maximum amount of capital that it aims to gather, while soft cap is the capital amount gathered at which the ICO event will be considered successful. It is the minimal amount of funds needed and aimed at by the project to proceed as planned.

statistics, the average ICO funding is between 10 to 30 million USD, with approximately 7% of ICOs raising more than 100% of their intended amount (i.e. hard cap), while 67% managed to raise between 50%-100%⁷. ICOs who did not reach their funding target in most cases return the funds to the public unless defined otherwise in the terms and conditions or programmed otherwise in the smart contracts. Some ICO organisers state that all the unsold tokens will be burnt, which adds to their credibility. Since most ICO projects are conceptual from the investor's side, it is difficult to evaluate if the raised funds are sufficient to make the project operative or not.

CRYPTO ASSET LIFE CYCLE

In accordance with the terms set out in the issuance of tokens white paper and / or the smart contract of the issued token, when the organiser's venture completes a technically feasible product, token holders can exercise their right to receive products, services or other benefits offered. Such undertakings may be for a limited or unlimited period, all as outlined in the white paper. Below are some possible business models:

- Purchase of the product or service from the issuing company in return for the token held
- Granting a perpetual right to use a service developed by the issuing company to anyone that holds a token (i.e. software or platform)
- Conversions of tokens to shares, profit participation units or another method of benefit
- Development of dedicated applications for the platform sold in exchange for tokens.

CURRENT REGULATORY LANDSCAPE

Some regulators have moved from ignoring ICOs to banning them or regulating them in accordance with the economic nature of the token. However, the interpretation of the nature of the token can vary greatly between countries. Regulators are becoming more active if there are signs of potential illegal activity relating to legislation and regulations regarding banking, currency control, securities, anti-money laundering, tax, insurance and personal data protection.

Given the wide variety of types of crypto assets and ICO set-ups, generalisation is impossible and comprehensive analysis of potential illegal activity is required in each individual case. Most often, regulators base their assessment on the underlying economic purpose of an ICO, particularly when there are indications of an attempt to circumvent existing regulations. When an ICO is created in order to fund an entity, then the rights attached to the token or coins issued by the ICO may fall within the definition of a security according to the interpretation of most regulators. If the rights attached to the crypto asset appear to be ownership of the entity, voting rights in decisions of the entity or some right to participate in profits of the entity should be included in the white paper. Where it appears that an issuer of an ICO makes an offer of a share, some countries may force the issuer to prepare a prospectus similar to offers of shares in an initial public offering (IPOs).

CONSIDERATIONS BEFORE ISSUING CRYPTO ASSETS THROUGH AN ICO

Before deciding to issue crypto assets through an ICO, you should identify the intended business activities related to the crypto assets, understand the ICO and assess the business risks to your entity. Below are steps and questions that can help you to understand and assess business risks relating to such activities:

Identify business activities relating to crypto assets

If you plan to undertake significant business activities relating to crypto assets, ensure that you understand the nature of these transactions and their potential effect on your financial statements.

Obtain independent advice regarding the regulatory requirements.

Understand the ICO and the crypto asset(s) in use

The following questions can help you gain an understanding of the ICO itself (this is not a comprehensive list):

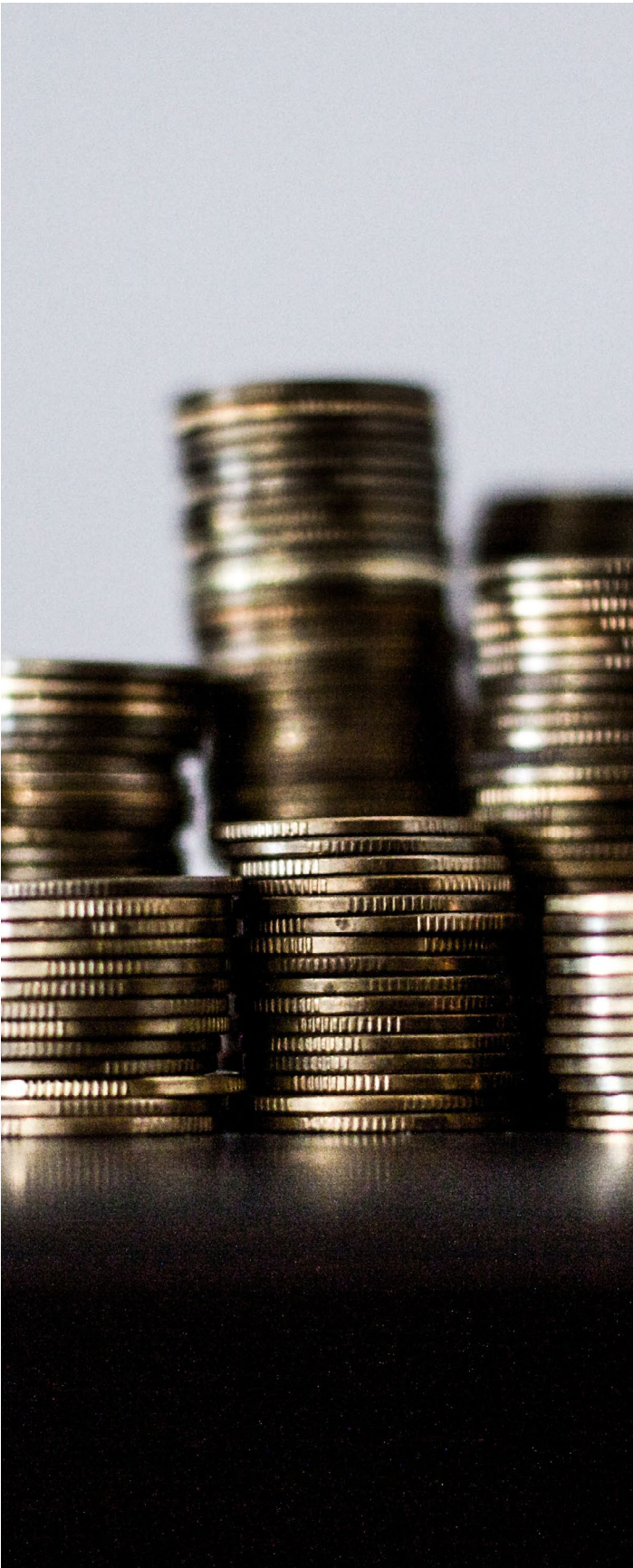
- Which services or products are being developed by your entity and how they are related to the blockchain technology?
- What is the rationale between the project and the token?
- Do you have business cases for the new product / service?
- Do you have a clear project roadmap?
- Do you have a detailed white paper explaining the technical details of the token functionality?
- Does a prototype or product already exist?
- Does the ICO comply with regulatory standards applicable to your entity and expected investors (there may be relevant regulatory requirements from other countries)?
- Have you (or a contracted third party) reviewed the quality of the smart contract code?
- Is the token sale information clear and precise?
- Do you have an informative website or explainer video?
- Do you have a good active social media presence? What is the buzz on social media about this ICO?
- Who are the presale investors?

Assess potential business risk

Below is a list of possible questions you should ask yourself while assessing the potential business risk to your entity (this is not a comprehensive list):

- Do you have sufficient knowledge and experience in crypto assets, blockchain technology, smart contracts and ICOs?
- Do you comply with the regulatory requirements (consider all relevant regulatory requirements, including cross-border ones)?
- What is the ICO rating according to the rating sites?
- Are you qualified to assess the quality of the smart contract code?
- What is the ICO or crypto asset investment risk?
- What will the impact be on your financial statements?
- What are the tax implications?

Note that ICO organisers often establish their activities in a less regulated jurisdiction but operate globally which requires them to comply with regulations in the jurisdictions of their investors. For example, if an ICO issue tokens to US investors, it should comply with US securities laws. This concept applies to most western and Asian countries. Therefore, it is important to consider cross-border risk when considering business risks.



IDENTIFICATION OF ICO RISKS

Below is a list of potential ICO risks to be considered and whether they could result in risks of material misstatement (RMMs) in your financial statements. These are presented from 2 perspectives: whether you plan to issue crypto assets through an ICO or invest in crypto assets through an ICO:

CYBERSECURITY ATTACK		
WHAT COULD GO WRONG?	POTENTIAL RMMs TO ICO ORGANISER	POTENTIAL RMMs TO ICO INVESTORS
Hackers successfully substitute wallet addresses, access private keys, steal funds from investors' wallets or steal funds from ICO organiser. Such event may cause investors to lose their confidence, resulting in a failure of the crypto asset.	Going concern risk if the cybersecurity attack is severe. Risk of loss of funds to be received from the ICO as cryptocurrency.	Going concern risk if the cybersecurity attack is severe and the investment is material. Risk of loss of crypto assets.
CHANGE IN THE REGULATORY ENVIRONMENT		
WHAT COULD GO WRONG?	POTENTIAL RMMs TO ICO ORGANISER	POTENTIAL RMMs TO ICO INVESTORS
Failure to execute transactions involving crypto assets due to regulatory restraints. Investigations by the regulators or prohibitions regarding temporary or permanent transactions in crypto assets. ICO organiser will not be able to complete the project which eventually results in ICO failure.	Going concern risk if your entity is dependent on ICO funding. Risk of loss of funds to be received from the ICO as cryptocurrency.	Risk of loss of crypto assets.
PROJECT FAILURE		
WHAT COULD GO WRONG?	POTENTIAL RMMs TO ICO ORGANISER	POTENTIAL RMMs TO ICO INVESTORS
ICO organiser spends all funds received from investors, but fails to complete the product or services. Key personnel leave the project. Investors lose interest in the project.	Going concern risk if your entity is dependent on ICO funding.	Risk of loss of crypto assets.
ICO ORGANISER FAILS TO ACHIEVE ITS TARGET FUNDING GOALS		
WHAT COULD GO WRONG?	POTENTIAL RMMs TO ICO ORGANISER	POTENTIAL RMMs TO ICO INVESTORS
Funds may not be returned to the investors (e.g. the organiser changes the terms of the ICO).	Going concern risk if lawsuits are submitted or an active investigation has been started by regulatory bodies.	Risk of loss of crypto assets.
INVESTOR PAYS FOR TOKEN BUT THERE IS A DELAY BEFORE IT IS RECEIVED		
WHAT COULD GO WRONG?	POTENTIAL RMMs TO ICO ORGANISER	POTENTIAL RMMs TO ICO INVESTORS
The investor has no evidence of ownership of the token other than the online registration form.		Risk of loss of crypto assets.

FUNDS OR TOKENS WERE TRANSFERRED TO A WRONG BLOCKCHAIN ADDRESS		
WHAT COULD GO WRONG?	POTENTIAL RMMs TO ICO ORGANISER	POTENTIAL RMMs TO ICO INVESTORS
The investor entered the wrong blockchain address of the ICO organiser when registering for the ICO so their funds never reach the organiser. The investor submitted a wrong blockchain address for receiving the token transfer when registering for the ICO so they never receive the tokens / crypto assets. Due to the irreversible nature of the blockchain technology, these funds and/or tokens can be considered lost.		Risk of loss of crypto assets.
TECHNICAL FAILURE OF THE SMART CONTRACT, THE WEBSITES OR ORACLE ⁸		
WHAT COULD GO WRONG?	POTENTIAL RMMs TO ICO ORGANISER	POTENTIAL RMMs TO ICO INVESTORS
Failure of the smart contracts executions, data input or output. ICO organiser does not issue the crypto assets at all due to technical reasons, or the ICO organiser issues a different quantity of crypto assets.	Going concern risk if lawsuits are submitted or an active investigation has been started by regulatory bodies.	Risk of loss of crypto assets.
MARKET LIQUIDITY, MARKET SIZE/CAP AND LISTINGS ON CRYPTO EXCHANGES		
WHAT COULD GO WRONG?	POTENTIAL RMMs TO ICO ORGANISER	POTENTIAL RMMs TO ICO INVESTORS
Value volatility of the crypto assets. Active market does not exist (i.e., a market in which transactions for the crypto asset take place with sufficient frequency and volume to provide pricing information on an ongoing basis).	Going concern risk if the crypto assets' value becomes worthless, the ICO community loses interest or key people leave the ICO.	Loss of value of crypto assets.
FRAUD BY THE ICO ORGANISER		
WHAT COULD GO WRONG?	POTENTIAL RMMs TO ICO ORGANISER	POTENTIAL RMMs TO ICO INVESTORS
The ICO organiser uses investors' funds for other purposes and not for the product or service development.	Going concern risk if lawsuits are submitted or an active investigation has been started by regulatory bodies.	Risk of loss of crypto assets.

⁸ Oracles are trusted data feeds of real-world occurrences that send information to a blockchain to be used by smart contracts, removing the need for smart contracts to directly access information outside their network.

IDENTIFICATION OF FINANCIAL REPORTING RISKS

In addition to business risks and ICO risks discussed above, you may also have some financial reporting risks related to crypto assets and ICOs. Below is a list of additional potential financial reporting risks to be considered. These are presented from 2 perspectives: whether you plan to issue crypto assets through an ICO or invest in crypto assets through an ICO:

INCORRECT ACCOUNTING USED FOR TOKENS ISSUED IN ICO AND OTHER CRYPTO ASSETS TRANSACTIONS		
WHAT COULD GO WRONG?	POTENTIAL RMMS TO ICO ORGANISER	POTENTIAL RMMS TO ICO INVESTORS
Tokens still to be issued or already issued are not recorded / presented by the ICO organiser based on their nature (e.g., they may be deferred revenue, liability, equity, or revenue to the ICO organiser). They may also be valued incorrectly as several factors will influence how they are to be valued.	Risk of incorrect accounting, valuation and presentation of tokens.	

CRYPTO ASSETS NOT RECORDED, VALUED OR PRESENTED PROPERLY AT YEAR-END		
WHAT COULD GO WRONG?	POTENTIAL RMMS TO ICO ORGANISER	POTENTIAL RMMS TO ICO INVESTORS
Depending on the nature of the crypto asset, the investor may record it inaccurately, value it improperly at year-end or present it incorrectly in the financial statements.		Risk of incorrect accounting, valuation and presentation of crypto assets.

INCORRECT ACCOUNTING FOR TAX LIABILITIES RELATED TO CRYPTO ASSETS		
WHAT COULD GO WRONG?	POTENTIAL RMMS TO ICO ORGANISER	POTENTIAL RMMS TO ICO INVESTORS
Many tax authorities have clear policies on how crypto assets are to be taxed. The tax liabilities may not be accounted for correctly.	Risk of incorrect accounting for income taxes.	Risk of incorrect accounting for income taxes.

CONCLUSION

This publication has presented recent trends relating to crypto assets issuance and their related risks. You need to understand and assess potential business risks and financial reporting risks prior to getting involved in ICOs and issuing or investing in crypto assets.

If you have questions relating to this topic, contact your local BDO office for assistance.



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