

The Digital Economy: Understanding Blockchain Technology, Distributed Ledger Technology, and Digital Assets

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Introduction

Financial year 2022 has been an important year in the sector of digital assets and distributed ledger technology. This paper, which is current as of November 30, 2022, aims to present relevant tax developments related to distributed ledger technology and digital assets in Canada and other jurisdictions.

Ownership of bitcoins by Canadians is on the rise, even though their level of understanding of Bitcoin is relatively low.¹ In 2021, more than 90 percent of Canadians had heard about Bitcoin.² The government of Canada and the Canada Revenue Agency (CRA) have published guidelines for taxpayers with regard to investing in “cryptocurrency,”³ valuing “cryptocurrency,”⁴ and keeping record of “cryptocurrency” transactions.⁵ In addition, Canadian legislative proposals targeting cryptoassets were submitted and sanctioned for the Excise Tax Act⁶ (ETA) and testify to the firm position taken by Canadian legislators as to the nature of cryptoassets for the purposes of the ETA. It can be anticipated that the tax legislative landscape will be littered with new provisions and regulations related to distributed ledger technology and digital assets in the not-so-distant future.

The purpose of this paper is to inform readers of recent developments and positions taken by the Department of Finance and the CRA with regard to distributed ledger technology and digital assets, and to discuss the international legal and tax trends identified in the legislation and regulations of various jurisdictions that, like Canada, are in the process of laying the foundation of the legislative framework pertaining to distributed ledger technology and digital assets.

The remainder of this paper is organized as follows. The first section introduces the fundamental technical concepts of distributed ledger technology and digital assets. The second section highlights the legal and tax framework established in other jurisdictions with regard to digital assets. The third section discusses the Canadian legal and tax framework with regard to digital assets. The fourth and final section provides a summary and concluding comments.

Understanding Distributed Ledger Technology and Digital Assets

The Satoshi Nakamoto Bitcoin White Paper

On October 31, 2008, a person or group using the pseudonym Satoshi Nakamoto published a white paper titled *Bitcoin: A Peer-to-Peer Electronic Cash System*.⁷ The white paper, which aimed to provide a system for transacting between two parties without the need for a trusted third party,⁸ established the basis of the first successful distributed ledger technology (DLT).⁹ In the introduction to the white paper, Nakamoto stated the following:

Commerce on the Internet has come to rely almost exclusively on financial institutions serving as trusted third parties to process electronic payments. While the system works well enough for most transactions, *it still suffers from the inherent weaknesses of the trust based model*. . . .

What is needed is *an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party*.¹⁰

Since then, the potential of DLT beyond the transfer of digital assets has begun to be understood more fully.

Introduction and Terminology

Decentralized Ledger Technology and Blockchain

DLT has been defined by a participant in the industry as follows:

Distributed ledger technologies, like blockchain, are peer-to-peer networks that enable multiple members to maintain their own identical copy of a shared ledger. Rather than requiring a central authority to update and communicate records to all participants, DLTs allow their members to securely verify, execute, and record their own transactions without relying on a middleman.

While there are a wide variety of DLTs on the market, they are all comprised of the same building blocks: a public or private/permissioned/permissionless distributed ledger, a consensus algorithm (to ensure all copies of the ledger are identical), and a framework for incentivizing and rewarding network participation.¹¹

The terms DLT and blockchain are not to be used interchangeably; blockchain is just one type of DLT. The Bitcoin blockchain was the first successful DLT platform, since it was the first tool to allow digital asset transfers over the Internet, without the need for a trusted intermediary. The absence of an intermediary made the Bitcoin blockchain the world's first public digital payment infrastructure not controlled by a single entity.

Prior to the Bitcoin blockchain, the only way to exchange value was by means of paper money or money held by a financial institution in a digital format. The latter infrastructure constrains participants to use the services of financial institutions in order to transact money in a way other than with paper money. With the Bitcoin blockchain, any user may create an address and transact Bitcoin.

DLT differs from the traditional cashless transaction systems (debit and credit cards), which involve multiple players acting "behind the scenes." For example, when a customer buys a carton of milk from the supermarket and pays by credit card, the transaction involves, at the very least, the customer's financial institution, the supermarket's financial institution, and the credit card company. The solution presented by DLT allows transactions to take place without the need for a trusted intermediary.

Blockchain

Blockchain is a type of DLT that is a decentralized "master" digital ledger, designed to be tamper-proof and to be immutable.¹² The technology behind blockchain allows for the tracking of transactions, which are all recorded in different blocks composing the blockchain. Contrary to popular belief, blockchain technology aims to be extremely secure. Blockchain operates as a shared ledger in which multiple parties post their transactions, making the shared ledger the only source of truth.¹³

It is interesting to consider societies' motivators for (1) accepting new technologies such as blockchain and (2) transitioning from current and existing technologies and platforms toward new technologies such as blockchain. This could be explained by the vulnerabilities and points of failure experienced by private intermediaries. Below is a list of recent examples:

- 1) In September 2017, Equifax, an American consumer credit reporting agency, announced a data breach that exposed the personal information of 147 million people.¹⁴
- 2) In February 2016, hackers issued fraudulent instructions through the Society for Worldwide Interbank Financial Telecommunication (SWIFT) network to transfer close to US\$1 billion belonging to the central bank of Bangladesh.¹⁵
- 3) In October 2016, cyberattacks were launched against the Internet domain name system (DNS) provider Dyn, which brought down many websites including Twitter, Netflix, and Reddit.¹⁶

- 4) Fraudulent transactions by the employees of Punjab National Bank totalling US\$1.8 billion occurred from 2011 to 2017 through the use of the SWIFT interbank messaging system.¹⁷

Digital Assets, Cryptoassets, and Cryptotokens

Digital Assets

Digital assets are assets that exist in a digital format. Examples of digital assets include pictures stored on cellphones and PDF documents. They also include cryptoassets. Blockchain technology can be used to register, validate, and store exchanges of these assets.

NASDAQ has introduced an interesting definition of digital assets, demonstrating how these terms have evolved since the inception of blockchain technology:

In its most basic definition, digital assets can be defined as anything that exists in a digital format. The phrase “digital assets” has historically referred to media formats that were traditionally physical items, such as photos, videos, and documents, that began to being [sic] created, stored, and shared in a digital environment.

However, since the emergence of blockchain technology, the term “digital assets” has expanded to include investable asset types such as cryptocurrencies, NFTs, asset-backed tokens, and tokenized real estate. As these new blockchain-backed digital assets have become more widely adopted, the definition of the phrase has shifted to being primarily focused on assets that are backed by a distributed ledger, rather than digital media files. Many physical assets, such as real estate and commodities, can be tokenized and create a digital asset for trading, opening up new possibilities for digital assets marketplaces.¹⁸

Cryptoassets

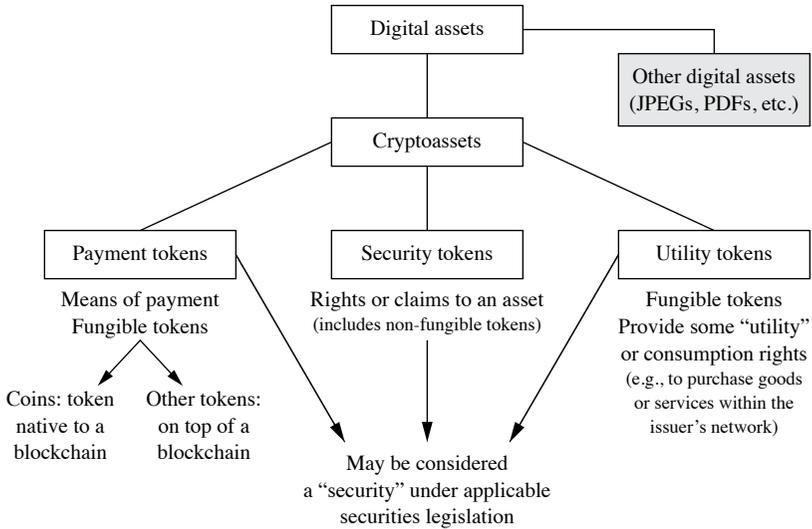
Cryptoassets are digital assets that depend on cryptography, and can be divided into three different categories: payment tokens, security tokens, and utility tokens. See figure 1.

These classifications are made according to common terminology used in the industry. They do not necessarily mean that the relevant authorities or agencies (such as financial and tax authorities) in a given jurisdiction will classify tokens in this manner. The legislative framework of each separate jurisdiction needs to be examined in order to make this determination.

For instance, a token that qualifies as a “security” under the domestic securities legislation of a jurisdiction would generally be subject to the same legal treatment of other securities.

Germany’s financial regulatory authority¹⁹ describes the different categories as follows:

Figure 1 Digital Assets Classification



Payment tokens (like Bitcoin): these are generally used exclusively, or among other things, as a personal means of payment and they tend not to have any intrinsic value. They have no other function, or only limited functions, beyond this.

Securities tokens (equity and other investment tokens): users have membership rights or contractual claims involving assets, as with equities and debt instruments.

Utility tokens (app tokens, usage or consumption tokens): can only be used in the issuer’s network to purchase goods or services. Very complex legal structures generally apply to utility tokens.²⁰

1) Payment tokens

Payment tokens are used as a means of payment in a digital environment. They can be divided into two categories: payment tokens and coins.

A cryptocurrency “operates on its own independent blockchain and acts like a native currency within a specific financial system. Accordingly, a coin is essentially used as a medium of exchange or store of value within a digital economic network.”²¹ A coin can be traded. Standard money, commonly referred to as “fiat” money, is different from cryptocurrencies in that it is issued by central banks.

Coins are native to a DLT network, whereas payment tokens can be tokens on top of an existing network. For example, bitcoins are cryptocurrencies because they are native to the Bitcoin blockchain. Coins are tokens, but tokens are not necessarily native coins to a blockchain network. Rather, “tokens are generally issued by companies using existing third-party blockchains such as the Ethereum blockchain.”²²

Karl Montevirgen, a financial writer at Encyclopedia Britannica specializing in the field of crypto markets, highlights the distinction between a crypto “coin” and a crypto “token”:

What is a coin?

A coin is a cryptocurrency that comes with its own dedicated and stand-alone blockchain. In other words, a coin is a specific blockchain’s native cryptocurrency.

For example, the Bitcoin network’s native coin is Bitcoin. Ethereum’s coin is called Ether. Ripple Labs’ coin is called XRP. They each have their own standalone blockchain networks.

Some blockchain networks can be used for other cryptocurrencies and other decentralized applications in addition to their own native coin. This is where things can get confusing, because some of them are called “coins” for the sake of convenience. But technically they’re “tokens.”

What is a token?

A token is a cryptocurrency or crypto asset that runs on another cryptocurrency’s blockchain. An example of a cryptocurrency token is USD Coin (USDC), a fiat-backed stablecoin that runs on the Ethereum blockchain. An example of a crypto asset token is a non-fungible token (NFT). Most NFTs run on blockchains built on the Ethereum network.²³

Cryptotokens are considered to be fungible, which means “being something (such as money or a commodity) of such a nature that one part or quantity may be replaced by another equal part or quantity.”²⁴ In other words, a fungible good is a good that is interchangeable with another good, so that a recipient of that good does not mind receiving one instead of another. For example, if a bank customer goes to an ATM to withdraw \$50 and requests that the withdrawal be in the form of a single \$50 bill, that customer will be indifferent to receiving a \$50 bill with specific serial code. Although the bills are serially numbered, the bank customer is concerned only with leaving the bank with a \$50 bill, whichever particular one it might be.

Another example of a fungible item is postage stamps. In the 1920s, a person who wanted to send a letter by mail had to buy and apply stamps worth a total of three cents on the envelope. The post office responsible for sending the letter was indifferent as to whether three stamps worth one cent each or one stamp worth three cents were affixed to the envelope. In this context, the stamps were fungible.

In light of the above, any reference to a “fungible crypto *coin*” is a reference to a native coin of a distributed network, and any reference to a “fungible crypto *token*” is a reference to a coin or token the records of which are recorded on a distributed ledger network. Finally, any reference to cryptoassets²⁵ is a reference to a type of asset that depends primarily on cryptography and DLT, including cryptocurrencies and tokens.

2) Security tokens

Security tokens resemble financial instruments²⁶ in that they allow for the transfer of an asset or a bundle of assets to a token.²⁷ A company could issue tokenized shares during an initial coin offering. As a result, the owner of the tokenized shares may be granted rights and dividends.

Tokens may be fungible or non-fungible. Fungible tokens can be used interchangeably without their recipient being concerned about which specific token they receive. Non-fungible tokens (NFTs) are unique, indivisible, irreplaceable, non-interchangeable digital assets; they are not used for payment but serve to encode in the blockchain the ownership of unique tangible/corporeal or intangible/incorporeal property. With regard to NFTs, blockchain technology provides a reliable method for proving ownership and providing traceability of an owner's transfers.²⁸

3) Utility tokens

Utility tokens provide "utility" or consumption rights within the token issuer's network. They can be used to buy products or unlock digital access to an application or a service. "Utility tokens generally represent access to a service or can function as a medium of exchange within an ecosystem."²⁹ For example, users who invest in a utility token may receive future access to the products and services offered by the token issuer. Utility tokens can best be described as digital "vouchers," such as gift cards or public transport tickets.

Use of Adequate and Accurate Terminology

The term "cryptocurrency" must be used with prudence, because it implies that "cryptocurrency" is currency. Although the term is commonly used, a detailed analysis shows how it can be used incorrectly.

Note that the term cryptocurrency is used in this section in the same way that it is used by the CRA. The authors do not agree with this use for the reasons highlighted below.

The term "currency" is not defined in Canada's Currency Act.³⁰ The *System of National Accounts, 2008*,³¹ developed through the joint effort of multiple international organizations, includes a definition of "currency" in paragraph 11.52:

Currency consists of notes and coins that are of fixed nominal values and are issued or authorized by the central bank or government. (Commemorative coins that are not actually in circulation should be excluded as should unissued or demonetized currency.) A distinction should be drawn between domestic currency (that is, currency that is the liability of resident units, such as the central bank, other banks and central government) and foreign currencies that are liabilities of non-resident units (such as foreign central banks,

other banks and governments). *All sectors may hold currency as assets, but normally only central banks and government may issue currency.* In some countries, commercial banks are able to issue currency under the authorization of the central bank or government.³²

Cryptotokens are neither notes nor coins of fixed nominal value and they are not issued or authorized by a central bank or government. It is hard to argue that cryptotokens are currency pursuant to the definition of that term in the *System of National Accounts*.

In the Canadian context, an important case, *Reference Re Alberta Statutes*,³³ shed light on the concept of money. In the decision, the Supreme Court of Canada stated:

[M]oney as commonly understood is not necessarily legal tender. *Any medium which by practice fulfils the function of money and which everybody will accept in payment of a debt is money in the ordinary sense of the words even although it may not be legal tender;* and this statute envisages a form of credit which will ultimately, in Alberta, acquire such a degree of confidence as to be generally acceptable, in the sense that bank credit is now acceptable; and will serve as a substitute therefor.³⁴

This statement is interesting because it extrapolates the function of money beyond a legal tender to any medium that by practice fulfills the function of money. Under Canada's Currency Act,³⁵ a tender of payment of money is a legal tender if it is made

- 1) in coins that are current for the amount of their denomination in the currency of Canada if it was issued under the authority of the Royal Canadian Mint Act;³⁶ or
- 2) in notes that are current for the amount of their denomination in the currency of Canada if it was issued under the authority of the Bank of Canada Act.³⁷

As it currently stands, cryptoassets are not legal tender in Canada because they are neither banknotes issued by the Bank of Canada nor coins issued by the Royal Canadian Mint.³⁸ In light of *Reference Re Alberta Statutes*, the following question remains: Can payment tokens be viewed as a “medium which by practice fulfils the function of money and which everybody will accept in payment of a debt”?³⁹ The progression of the fast-evolving crypto space will eventually answer this question. However, thus far, the Bank of Canada and the Department of Finance have taken firm positions on the subject, stating that payment tokens are neither currency nor money.

The Bank of Canada describes “money” as a medium of exchange, a store of value, and a unit of account.⁴⁰ The Bank of Canada provides the following description in respect of digital currency:

If you have a PayPal account or use prepaid cards to buy video games, you are using digital currency. This form of money comes in familiar units, such as Canadian or US dollars, and lives on a mobile phone, tablet, smart card or computer server.

Unlike an electronic payment, where money travels from a buyer to a seller, digital currency is parked in a “storage facility” during its electronic journey from source to destination.⁴¹

The Bank of Canada has expressly stated why cryptoassets are not money and why they should not be referred to as “cryptocurrencies”:

[Virtual products such as bitcoin] live and move on a computer network that directly links users. Transactions take place between anonymous addresses and are recorded on a “distributed ledger.” There is no trusted third party to manage the system or gather user information.

Many people use the term “cryptocurrencies,” but the Bank prefers to call them cryptoassets. That’s because these products don’t do a good job of performing the basic functions of money.⁴²

The Bank of Canada thus seems to support the position that cryptoassets do not meet the conditions of money according to the characteristics that it gives to money. The bank has also firmly expressed its view that cryptoassets will not become the money of the future. In addition, in 2021, the deputy governor of the Institute of Data Valorization stated:

Even in this increasingly digital economy, . . . cryptocurrencies such as bitcoin do not have a plausible claim to become the money of the future. They are deeply flawed as methods of payment—except for illicit transactions like money laundering, where anonymity trumps all other features—because they rely on costly verification methods and their purchasing power is wildly unstable. The recent spike in their prices looks less like a trend and more like a speculative mania—an atmosphere in which one high-profile tweet is enough to trigger a sudden jump in price.⁴³

Others have also expressed similar views. David Yermack, of the New York University Stern School of Business, stated:

Bitcoin also lacks additional characteristics usually associated with currencies. It cannot be deposited in a bank; instead it must be held in “digital wallets” that have proved vulnerable to thieves and hackers. There is nothing comparable to the deposit insurance relied on by banking consumers. No lenders use bitcoins as the unit of account for consumer credit, auto loans, or mortgages, and no credit or debit cards are denominated in bitcoins.⁴⁴

As it stands, with regard to taxation, Canadian legislators have been explicit in their view of cryptoassets fulfilling the function of money in the ETA:

money includes any currency, cheque, promissory note, letter of credit, draft, traveller's cheque, bill of exchange, postal note, money order, postal remittance and other similar instrument, whether Canadian or foreign, *but does not include currency the fair market value of which exceeds its stated value as legal tender in the country of issuance* or currency that is supplied or held for its numismatic value.⁴⁵

Cryptotokens are not issued by a country. It is believed that the exclusion provided for in the definition targets currency such as collectible coins, which, although they constitute legal tender, may have a fair market value that exceeds their face value.⁴⁶

On February 4, 2022, the Department of Finance proposed adding a definition of cryptoassets to proposed section 188.2 of the ETA regarding the application of goods and services tax (GST)/harmonized sales tax (HST) to crypto mining activities and to remuneration received as a consequence of performing mining activities.⁴⁷ According to the explanatory notes, “a cryptoasset is property^[48] (*defined in subsection 123(1) of the Act . . . and does not include money*) that is a digital representation of value and that exists only at a digital address of a publicly distributed ledger (e.g., blockchain).”⁴⁹ These legislative proposals have not yet been enacted into law.

The foregoing pertains to the ETA, but it would not be surprising if similar legal amendments were made to the Income Tax Act⁵⁰ (ITA), considering that one could reasonably argue that cryptotokens are not “property” within the meaning assigned to that term in subsection 248(1) of the ITA (discussed further below).

Technical Overview: What Are Blockchain Technology and Distributed Ledger Technology?

This section aims to provide readers with sufficient knowledge about blockchain technology to understand the tax implications related to the technology.

Basic Concepts To Understand How Exchanges Work on the Bitcoin Blockchain Network

- *Private key*: A private key is a string of 64 characters that is created when a user creates a crypto wallet. Ultimately, the private key will be used to sign transactions on behalf of the user⁵¹ and allows the user to prove ownership of the crypto assets held in the user's wallet. The private key should never be shared with anyone.⁵²
- *Secret phrase*: The secret phrase allows a user to retrieve the funds in the crypto wallet if the private key is lost.⁵³
- *Public key*: The public key is a string of 42 characters that validates that a user is the owner of a wallet address.⁵⁴

- *Wallet address*: The wallet address is an address that is sent to any sender to allow the user to receive cryptoassets.⁵⁵
- *Wallet*: A wallet holds all the addresses as well as the digital keys of a user, and usually takes the form of a mobile app or desktop software.⁵⁶

Requesting and Broadcasting a Transaction

To help explain the interaction between the blockchain network and digital assets, in figure 2 and the text below we illustrate how blockchain technology works using a Bitcoin transaction as an example.

Assume that user A wants to send two bitcoins to user B. User A will have to send the bitcoins to user B's wallet address.

The transfer from user A to user B will involve the following steps:

- User A generates a transaction that includes user A's address, user B's address, and user A's private key.⁵⁷
- Upon receipt of the transfer by user B, user B will be able to claim ownership of the two bitcoins transferred by user A using user B's private key.⁵⁸

In simple terms:

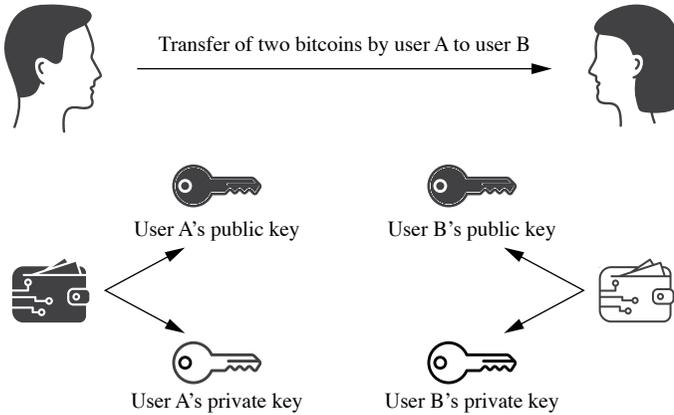
You can almost think of it as sending emails. Wallet addresses are your email addresses—anyone can send you emails if they have your email address. As soon as an email is sent to that address, it is encrypted (using a public key), only allowing the owner of that email address to access it. The receiver would then enter a password for the email (the private key) to read it.⁵⁹

Once the transaction is issued, it is broadcast to the entire blockchain network. The blockchain is an open database, which means that it is possible to trace transactions on the entire Bitcoin blockchain network.⁶⁰ However, traceability should not be confused with lack of privacy. Although all users of the system have access to all transactions as they are publicly announced, users may only be identified with the addresses issued from their public key.

The anonymity of cryptoasset transactions is a popular topic.⁶¹ Ultimately, users are increasingly required to disclose their personal identity at one point or another in the process. As it currently stands—and until the day that most goods and services may be bought with tokens via a blockchain network—people who are remunerated with bitcoins will ultimately have to exchange their coins for local fiat currency in order to buy goods and services.

In addition, users' wallets will either be “custodial” or “non-custodial”:

- Custodial wallets mean that users entrust the ownership of their cryptoassets to a third party that stores their private key on a centralized exchange.⁶²

Figure 2 Bitcoin Transfer

Depending on the company that provides custodial services, users have to follow an onboarding process in the course of which they must submit information and documents for “know your customer” or “know your client”⁶³ (KYC) requirements to be satisfied.⁶⁴

- Non-custodial wallets are wallets where only the holders own and control the private keys, giving users full control of their funds.

Validating a Transaction

Validating transactions in a decentralized system is much less simple than in a centralized system. Because there is no authority that can verify that the issuer of a transaction is the owner of the asset that is being transferred to a third party (or that the asset has not previously been transferred), this could lead to certain issues such as the “double spending” (that is, where the same asset is transferred more than once).

The Bitcoin white paper provides a transaction verification system based on a process called proof of work (PoW). This process requires the collaboration of network members called miners, who execute the PoW to validate transactions. The validated transactions form part of a mined block⁶⁵ that is appended to the existing chain of blocks.

This verification chain is not without flaws; most notably, it requires a large amount of computing power to validate transactions, which depletes environmental resources.⁶⁶ To address this disadvantage, another method of transaction validation, known as proof of stake (PoS), has been designed to verify transactions without having to use the considerable amount of computing power required to exercise PoW. Bitcoin transactions are validated by miners executing PoW. This section of the paper first provides a technical explanation of how PoW is executed, and then explains PoS.

1) Proof of work

The Bitcoin white paper aimed to provide a solution to the double-spending problem in the context of a decentralized network:

We need a way for the payee to know that the previous owners did not sign any earlier transactions. For our purposes, the earliest transaction is the one that counts, so we don't care about later attempts to double-spend. The only way to confirm the absence of a transaction is to be aware of all transactions. In the mint based model, the mint was aware of all transactions and decided which arrived first. *To accomplish this without a trusted party, transactions must be publicly announced, and we need a system for participants to agree on a single history of the order in which they were received.* The payee needs proof that at the time of each transaction, the majority of nodes agreed it was the first received.⁶⁷

Blockchain works as a peer-to-peer system. The computers that form part of the network and run the Bitcoin software are called nodes, which are used to broadcast a transaction to all other nodes in the network. This is how the validity of transactions is first confirmed.⁶⁸

These nodes conduct verification of the transactions—for example, by verifying whether the funds that user A is sending to user B are available and verifying the signatures on the transaction.⁶⁹

If the nodes cannot verify a transaction—for example, because the receiver's public key is not valid, or because the sender does not have sufficient funds to perform the transfer—the transaction will be rejected.

Once a transaction is verified by the nodes, it is sent to a pool of pending transactions called the memory pool (or “mempool”). Transactions in the mempool are not confirmed and cannot be considered to be confirmed until they are officially added to the blockchain. In other words, the mempool stores information about transactions that have been validated by the nodes and that have not yet been confirmed and added to a block in the blockchain.⁷⁰

The process of adding transactions in the mempool to a block that will be appended to the blockchain is called mining. Mining Bitcoin requires miners to execute PoW.

Practising PoW requires network participants to solve extremely complex mathematical problems with regard to a certain number of transactions that they pick out of the mempool.⁷¹ Solving these mathematical problems is a guessing game and the chances of success are not very high. It seems that the chances of solving the mathematical problems are around one in 5.9 trillion.⁷² When the mathematical transaction is solved, the mined block is added to the blockchain. The network is then updated to reflect that a new block has been appended. The candidate blocks for which miners were unsuccessful are discarded. The process takes place again to confirm the transactions in the mempool.⁷³

Ultimately, as put forward in the Bitcoin white paper:

- 1) New transactions are broadcast to all nodes.
- 2) Each node collects new transactions into a block.
- 3) Each node works on finding a difficult proof-of-work for its block.
- 4) When a node finds a proof-of-work, it broadcasts the block to all nodes.
- 5) Nodes accept the block only if all transactions in it are valid and not already spent.
- 6) Nodes express their acceptance of the block by working on creating the next block in the chain, using the hash of the accepted block as the previous hash.⁷⁴

Mining requires a significant amount of computing power to execute PoW. In executing PoW, the more computing power that a miner or a pool of miners has, the more likely they are to solve the mathematical equation. This may act as a deterrent for miners to validate fraudulent transactions because not only will they not be incentivized if they do so, but they will also have to spend very costly computing power.

Miners are remunerated when they validly add a block to the blockchain. First, they receive newly mined bitcoins as payment for block creation, and second, they receive transaction fees.⁷⁵

2) *Proof of stake*

PoS is an “alternative consensus mechanism to Proof of Work.”⁷⁶ Unlike PoW, where all miners must compete to create the next block, PoS provides that one node will be selected to be the validator held to forge the next block. The creation of new blocks is called forging.⁷⁷ Users of a blockchain network who wish to be considered as validators will have to lock a certain amount of coins on the platform as their stake. A validator will be chosen by the system on the basis of factors such as randomized selection, staking age, and the amount of coins the validator has staked on the platform.⁷⁸

Considering that nodes that propose to be validators on the network have a certain amount of coins staked, they will be assessed penalties if they do not act according to protocol. For example, if they validate and forge a block that contains fraudulent data, “they may lose some or all of their stake as a penalty.”⁷⁹

Given that the value of the cryptoassets that are staked on a platform by a node will influence the chances of the node’s being selected as the next validator (the higher the value staked by the node, the more likely the node is to be selected), the system will use other selection processes to avoid a situation where only the wealthiest nodes are selected. These processes include “coin age selection.”⁸⁰ Coin age is the amount of time that proposed validators have had their cryptoassets staked on the platform.⁸¹

3) *51 percent attacks*

Blockchain technology is not without its vulnerabilities. At both the PoW and the PoS levels, there can be attacks on the system. It is therefore relevant to see under

what circumstances these attacks are likely and what it would take for a person or entity to attack the system.

With regard to PoW, in order to be able to attack the system, a person or group must have more than 51 percent of the computing power of the network to validate fraudulent transactions.⁸² With regard to PoS, “hackers would need to hold 51% of all cryptocurrency on the network.”⁸³

Ledger Consensus Protocol

In addition to the PoW and PoS systems, another protocol has been put forward to validate transactions on the blockchain: the XRP ledger “consensus” protocol, also known as the federated Byzantine agreement⁸⁴ (“consensus”), which was first developed by Ripple Labs, Inc. (XRP)⁸⁵ and later adapted by the Stellar blockchain (XLM).⁸⁶

Unlike PoW and PoS, consensus does not contemplate a single miner/validator or group to validate a transaction. Instead, to validate a transaction, nodes that are part of a blockchain validate blocks of data by reaching consensus on the solution to a given problem.⁸⁷ Each node must join a small group called a “quorum slice.” A quorum includes several nodes needed to reach a consensus within the system. A quorum slice is a small portion of a quorum capable of convincing other nodes to agree. A consensus is reached when a minimum number of nodes within the system (a quorum) agree that the solution reached is correct, thereby validating a block and allowing its inclusion on the blockchain.⁸⁸

Central Bank Digital Currencies

According to the Bank of Canada, a central bank digital currency (CBDC) is “a digital Canadian dollar. . . . This new form of money would be issued by the Bank of Canada and provide benefits similar to cash.”⁸⁹ The Bank of Canada’s website indicates that “the day may come when Canadians can no longer readily use cash or when an alternative private digital currency becomes widely adopted. That might be the tipping point when a CBDC could be needed.”⁹⁰ It seems, according to the Bank of Canada, that one of the primary motivations for issuing a CBDC would be a sufficiently cashless economy that could limit the use of the Canadian dollar in its physical form. According to Denecker, d’Estienne, Gompertz, and Sasia,⁹¹ four trends have likely spurred central banks’ interest in CBDCs:

- 1) there has been a rapid decline in the use of cash;
- 2) there is a growing interest in privately issued digital assets, signalling potential competition with central banks in their role as the sole provider of monetary value in sovereign economies;
- 3) some central banks perceive that their role as payments innovators is eroding; and
- 4) many central banks are looking to establish greater local governance over increasingly global payment systems.

CBDCs would perform the same function as traditional fiat currency: each unit would act as a mode of payment and store of value. However, CBDCs must not be confused with electronic money, which is broadly defined as “an electronic store of monetary value on a technical device that may be widely used for making payments to entities other than the [electronic] money issuer.”⁹² Since electronic money is backed by fiat currency, it requires a third-party intermediary, like a bank or a financial technology company such as PayPal, to store the money electronically. In contrast, CBDCs exist purely in a digital form and would therefore not require a third-party intermediary to store it electronically.

While the idea of CBDCs stemmed from the emergence of cryptoassets and DLT, it is important to note that not all existing or contemplated CBDC infrastructures use DLT. In fact, there is not only one type of CBDC; a wide variety of structures are being contemplated in various countries.⁹³ In February 2022, the International Monetary Fund (IMF) stated:

B. Distributed Ledger Technology vs Centralized Technology

Distributed ledger technology (DLT), the best known of which is blockchain, has in recent years emerged as a promising alternative to technologies that are based on centralized ledgers. Central bankers are therefore faced with another technology choice. The choice is particularly difficult as DLT is still developing, and its capacity and suitability are being explored. *Some pilots and proofs of concept are therefore testing DLT without necessarily expecting to select it for further development.*

The experiences so far suggest that there is no universal case for DLT as the primary engine of CBDC, and jurisdictions have different views on the potential merits of the technology. The Bahamas and the ECCB [Eastern Caribbean Central Bank] have DLT-based systems, and staff from both central banks cite the security of the technology as valuable for their needs.

The PBOC [People’s Bank of China], on the other hand, has tested DLT during its pilots and decided that its capacity to process transactions and store data does not meet its requirements. It is particularly concerned about e-CNY’s [China’s CBDC’s] ability to handle days with very high levels of transactions, such as the “Singles Day” (November 11, China’s equivalent to Black Friday in the United States).

However, the PBOC has committed to what it refers to as a “hybrid architecture.” Thus, DLT is being used in the e-CNY system but only in limited areas where it is deemed to have an advantage over other technologies. Intermediaries can also base their activities on any technology, including DLT, and still function in the e-CNY ecosystem. This openness to different technologies is part of what the PBOC calls a “Long Term Evolution System,” through which new features of technology can continue to be added to the e-CNY even though its core is a centralized ledger.

The e-peso did not rely on DLT, but BCDU [Banco Central de Uruguay] staff acknowledge that a potential second e-peso pilot might test the appropriateness of DLT, or a hybrid system that incorporates DLT for particular purposes.

The BOC [Bank of Canada] has not decided on technology but is carrying out multiple technological workstreams, including DLT. Its staff has expressed some skepticism about the suitability of DLT for central bank purposes but acknowledges that DLT can support some important functions. One possibility would be to combine different technologies to achieve different purposes.

The Riksbank [Sweden's central bank] is currently exploring a DLT-based proof of concept, but its staff stress that a potential future e-krona does not necessarily have to be built on DLT. A second e-krona proof of concept or pilot could thus be based on a different technology.⁹⁴

According to the Atlantic Council, 19 of the Group of Twenty countries are exploring a CBDC, with 16 already in development or pilot stage, including Canada through "Project Jasper." Launched in March 2016, Project Jasper is a collaborative research initiative led by Payments Canada, the Bank of Canada, financial innovation consortium R3, and a few Canadian financial institutions. The goal of the project is to understand how DLT could transform the future of payments in Canada.⁹⁵

As of November 2022, the central banks of nine countries (eight Caribbean nations and Nigeria) have officially launched a CBDC.⁹⁶

Other Concepts Related to Blockchain Technology and Distributed Ledger Technology

Stablecoins

Stablecoins are a type of cryptoasset. Their value is pegged to a highly liquid asset such as national fiat currencies, financial assets, and/or cryptoassets through a stabilization mechanism. Stablecoins aim to control the high volatility of cryptoassets.⁹⁷ Examples of stablecoins include Tether, Dai, and USDC.⁹⁸

Generally speaking, centralized finance⁹⁹ (CeFi) stablecoins are designed so that their value is pegged to a national fiat currency on a one-to-one basis. Decentralized finance (DeFi) stablecoins are algorithmic stablecoins that use smart contracts to manipulate prices by encouraging arbitrageurs to buy and sell as needed to maintain the national fiat currency peg.¹⁰⁰

The volatility of cryptoassets makes them difficult to use for payments and day-to-day transactions. For instance, Bitcoin's price rose from less than \$5,000 in March 2020 to more than \$75,000 in April 2021, only to plunge almost 50 percent over the following two months.¹⁰¹ Using stablecoins eliminates the risk for those who seek to avoid price fluctuations.

Therefore, it is expected that stablecoins could play an important role in tokenized financial markets; securities could be converted into cryptotokens on a blockchain network and traded using stablecoins, which would improve "liquidity, transaction speeds, and transparency while reducing counterparty risk, trading costs, and other barriers to market participation."¹⁰²

Investments

Cryptoassets can be used either as (1) a store of value or an investment or (2) for trading activities.

Store of Value or Investment

Many users, in particular non-business individuals, buy cryptoassets for the purpose of holding them as either a store of value or an investment.

1) Store of value

Because assets can maintain their value over a period of time,¹⁰³ certain investors consider them to be a store of value, just like fiat money or precious metals. Certain types of cryptoassets can be considered a safer store of value than others, notably because of their importance in the eyes of those who take part in the crypto ecosystem.¹⁰⁴ Well-established tokens such as Bitcoin and Ethereum and, to an even greater extent, stablecoins (because they eliminate volatility) can very well be considered stores of value.¹⁰⁵

2) Investment

Cryptoassets may also be regarded as investments, which could be considered the “main” or “popular” use of cryptoassets, especially because of the soaring rise in the value of Bitcoin in the past few years.

However, most people see cryptoassets as highly volatile and many do not consider them to be a safe investment, and this view has been amplified by various media headlines. In fact, studies have shown that the general population believes that cryptoassets are very or somewhat unsafe investments.¹⁰⁶

Trading Activities

Individuals or businesses can also engage in the activity of trading cryptoassets. Trading mainly involves speculating on cryptoasset price movements by buying and selling such assets. This trading can be done via broker through a custodial wallet or directly via the cryptoasset exchange through a non-custodial wallet. The IMF’s October 2021 *Global Financial Stability Report* revealed that cryptoasset exchanges operating in some emerging markets and developing economies have reached trading volumes comparable to those of local stock exchanges and interbank foreign exchange markets.¹⁰⁷

Depending on the purpose for which cryptoassets are held (as a store of value or investment or for trading), the tax implications for holders of cryptoassets may differ, as detailed below.

Payments (Purchases of Goods and Services)

As of the end of 2022, 15,000 organizations worldwide accepted Bitcoin, including Microsoft, AT&T, and Wikipedia.¹⁰⁸ Around 85 percent of surveyed merchants

expect that digital asset payments will be accepted by suppliers in their industry in five years.¹⁰⁹

The digital asset ecosystem is rapidly evolving, and it is expected that merchants will be increasingly accepting digital assets as a means of payment.

Nevertheless, the use of cryptoassets as a means of payment may (1) cause certain practical difficulties for merchants accepting these forms of payment, and (2) be subject to regulatory control to ensure transparency.

Owing to the high volatility of certain cryptoassets, when merchants receive them as payment for goods delivered or services provided, there is a risk that the cryptoassets may suddenly plummet in value (or, conversely, increase drastically in value). To eliminate the volatility risk, a possible solution for the merchants would be to convert digital assets received as payment into stablecoins upon receipt.

From a purely practical perspective, the purchase of goods and services using cryptoassets implicates considerations such as the fact that cryptoasset transactions are irreversible (which may hamper transactions in cases where the customer requests a refund, unless the parties agree to proceed with a reimbursement in fiat currency). The use of cryptoassets for payment also raises certain issues from a tax perspective, because it involves disposing of the cryptoassets. This will be discussed further below.

Authorities from various jurisdictions are also concerned that the use of digital assets as a means of payment may have certain impacts on the stability of their economic and financial systems and on the risk of cybertheft and money laundering.¹¹⁰

Cross-Border Payments and Transfers/Remittances

Cryptoassets and blockchain technology facilitate cross-border money transfers (also known as remittances) and lower transaction fees by eliminating intermediaries. If user A in country A wants to transfer two bitcoins to user B in country B via a decentralized network, it can do so digitally with very little delay and without having to resort to a money transfer service.

However, the Bank of Canada takes the position that “the cross-border and online nature of these [crypto] assets . . . can create legal uncertainty about how to apply some existing regimes and make enforcement action challenging.”¹¹¹ For instance, in Canada, traditional money services businesses (which include banks, credit unions, money transfer businesses, cheque cashing businesses, and currency exchanges) are specifically regulated. Cross-border cryptoasset transactions are not subject to a specific legal framework. Various jurisdictions are still in the relatively early stages of developing legal frameworks around cryptoassets in general, so it will be interesting to see how cross-border cryptoasset dealings will be regulated in the future.

Other concerns that authorities from various jurisdictions have with cross-border remittances are the money-laundering and tax-avoidance/tax-evasion risks associated with such remittances. As of 2022, not only is there no central global organization or regulator that commands full visibility on cryptoasset transactions, but

national authorities are debating in the courts whether they have jurisdiction to regulate such activities (for example, the *SEC v. Ripple Labs* case, discussed below). On October 10, 2022, the Organisation for Economic Co-operation and Development (OECD) delivered the Crypto-Asset Reporting Framework (CARF),¹¹² a standardized tax transparency framework that provides for the reporting and exchange of information with respect to cryptoassets. The goal of the framework is to have information automatically exchanged with the jurisdictions of residence of taxpayers on an annual basis, including the reporting of “reportable retail payment transactions.” The CARF will be examined below.

Decentralized Finance

As mentioned above, DeFi refers to financial products and services that operate on decentralized platforms using blockchain technology, more specifically through computer code called smart contracts.¹¹³ It allows anyone to participate in the validation of automated peer-to-peer transactions such as lending, borrowing, purchasing, or trading digital assets, without the need for a central intermediary such as a bank or a centralized crypto exchange.

The key difference between decentralized and centralized finance lies in

- whether the financial service is automated by means of smart contracts on blockchain technology and relies on distributed governance to allow users to make decisions collectively (DeFi); *or*
- whether the financial service is provided by centralized intermediaries, such as a company or group of persons (CeFi).¹¹⁴

While DeFi records all the contractual and transaction details on a blockchain network, CeFi relies on the private records of intermediaries, such as banks or centralized crypto exchanges (centralized management).

In light of the recent collapses of Luna,¹¹⁵ BlockFi,¹¹⁶ Celsius,¹¹⁷ and FTX¹¹⁸ (which used to be the third-largest exchange by volume), as a result of which crypto investors lost billions of dollars in value, DeFi may be the long-term answer to the detrimental combination of centralized organization and lack of regulation.

Tokenizing Assets and Financial Markets

Tokenization is the process of digitally representing an existing real asset on a distributed ledger.¹¹⁹ In general terms, it involves converting a property of value into a digital token that may be used on a blockchain network.¹²⁰ Assets tokenized on the blockchain may be tangible assets such as precious metals, real estate, and art, or intangible assets such as intellectual property and securities (including shares in a corporation).¹²¹

Digital tokens are created and issued on a blockchain during what is defined by market participants as a “security token offering” (STO). One of the first successful

STOs raised US\$18 million in 2018 through the issuance of “Aspen coins,” where each digital token sold at US\$1 represented fractional ownership of the luxury 179-room St. Regis Aspen Resort in Colorado. Buyers of the tokens had to purchase at least 10,000 tokens.¹²²

The following is an example of real estate tokenization given by a tokenization service provider:

When an asset owner decides to tokenize a property, an Ethereum-standard (ERC20) real estate token (also called a security token) is created to represent shares of the property. The total value of all tokens will be equivalent to the total value of the securitized asset. Let’s look at a simple example.

Suppose you want to tokenize a 100,000 sq ft property that’s worth \$30M. A simple way to divide the property into shares is to offer one share for every square foot. So, you would divide the property into 100,000 shares, each representing one square foot of the property and valued at \$300.

Alternatively, you could divide the property into square inches, in which case each token would be worth \$2.08. You might choose this option to make your project accessible to a wider range of investors. Of course, you could also choose to limit the share offering to a certain percentage of the asset—say 20%, to retain majority ownership while raising funds for a new wing or renovations, for example.

The next step is to sell the tokens to investors.¹²³

Tokenization would (1) increase liquidity in the underlying good (such as an intellectual property right, which is not very liquid),¹²⁴ (2) improve transaction speeds and transparency (holding the token on a public blockchain has greater transparency than holding a property for which there is no public register of the owner of a claim), (3) enable investors to own a fraction of the underlying good (such as a piece of art) with a token, and (4) reduce counterparty risk, trading costs, and other barriers to market participation.¹²⁵

However, if one takes a step back, there are numerous regulatory and private-law issues with respect to tokenization.

First, unlike the laws regulating traditional financial markets, no laws seem to specifically and expressly regulate tokenization or tokenized items. When a company plans to sell securities to the public, it must usually prepare a prospectus, which is a detailed information document that provides full, true, and plain disclosure of all material facts relating to the securities being issued, to help investors make sound investment decisions.¹²⁶ However, it is unclear whether such an obligation would apply in the context of financing through tokenization.

Another issue is the characterization of the private-law rights derived from the tokenization process. Are the proprietary rights being legally transferred through the tokenization process? If the property is real property, are there any obligations regarding the land registry that must be respected in the context of the tokenization of the real property? What happens if one person is the owner of the real property in the land registry but another person owns the tokens that purportedly give

proprietary rights? Since there is no clear regulatory framework with respect to tokenization, these questions remain to be answered.

International Legal Framework and Taxation of Digital Assets

Legal and Tax Framework in the United States, Europe, Asia, and Other Jurisdictions

The year 2021 was a benchmark year for digital assets on a global scale. In November 2021, the total worldwide value of all cryptocurrencies surpassed US\$3 trillion,¹²⁷ up from US\$14 billion in early November 2016. It is estimated that more than US\$275 billion is being traded daily on more than 400 platforms.¹²⁸ Despite the market slowdown in 2022, the demand in the digital asset sector has been on a steep rise in the past 10 years.

Because of the rapid gain in popularity of the digital asset market, constant changes derived from the emergence of new technologies, and the added layer of complexity of digital trading (as opposed to activities taking place in a specific geographical location within a jurisdiction), various administrations around the world have been seeking to develop an adequate legal framework for digital assets. Some countries, especially the ones in which digital asset trading is particularly active and those that want to encourage or discourage blockchain development and the trading of digital assets, have already taken the initiative to adopt detailed regulations,¹²⁹ whereas others have not ratified a single piece of legislation relating to digital assets.¹³⁰ Authorities from various jurisdictions have also tried to apply existing regulatory frameworks to digital assets.

The application of existing frameworks, or the creation of new ones, is challenging considering the rapid evolution of the digital asset world, the patchiness of the available data (which implicates the need to keep tabs on a number of actors who may not currently be subject to reporting requirements), and the need to acquire the talent and learn the skills.¹³¹

This section of the paper reviews the current legal and tax landscape that has developed with respect to digital assets in other jurisdictions around the globe in order to help better understand where Canada could be headed in terms of its legislative framework.

International Legal Frameworks Regarding Digital Assets

United States

The United States is home to the largest number of crypto investors, exchanges, trading platforms, crypto mining firms, and investment funds.¹³² By 2022, 16 percent of adult Americans had purchased some form of digital asset,¹³³ and the United States leads the world by a wide margin at US\$47 billion in crypto gains.¹³⁴

Digital assets are regulated in the United States both at the federal level and in all 50 states. Currently, no significant laws or comprehensive legislative frameworks specifically governing digital assets have been adopted, although some laws have recently been proposed.¹³⁵

The United States has mostly been “regulating by enforcement.” US regulators in the digital asset sphere include the Securities and Exchange Commission (SEC), which regulates securities; the Commodity Futures Trading Commission (CFTC), which regulates commodities and derivatives; the Office of Foreign Assets Control (OFAC), which regulates economic and trade sanctions; and the Treasury Department’s Financial Crimes Enforcement Network (FinCEN), which regulates money laundering and other fraudulent financial activities. Each one of these regulating bodies has been very active in bringing regulatory action to the digital asset sector,¹³⁶ because many believe that all necessary laws and regulations have already been enacted and that projects in the digital asset sector should abide by such legislation.

For example, in December 2020, the SEC brought against Ripple Labs, Inc., creator of the XRP token, what many consider to be one of the most consequential enforcement actions¹³⁷ related to the sale of cryptoassets since the industry’s inception. Currently, the SEC generally has authority over the issuance or resale of any security. Therefore, if a digital asset is determined to be a security, the issuer of the asset must register the security with the SEC or offer it pursuant to an exemption from registration requirements.¹³⁸ The Ripple Labs case will be an important decision with considerable impact given that the dispute revolves around whether the XRP token may be considered an “investment contract” and therefore a security pursuant to the US Securities Act.¹³⁹ Since the term “investment contract” is not defined in American federal securities laws, the case of *SEC v. Howey*¹⁴⁰ must be relied on. This case sets out the requirement for qualifying as an “investment contract,” which is that it be an “investment in a common venture premised on a reasonable expectation of profits to be derived from the . . . efforts of others.” Ripple contends that the XRP token lacks the ingredients to be considered an investment contract, and both sides filed motions for summary judgment in September 2022 asking the court to decide whether the XRP token is a security that needs to be registered pursuant to the Securities Act. If the court grants a summary judgment, that would effectively decide the case. Many experts expect the SEC to lose the case,¹⁴¹ which would drastically limit the SEC’s authority to regulate cryptoassets in the United States and will have widespread effects on future SEC litigation.

As a key takeaway, issuers considering making an initial coin offering (ICO) (the cryptoasset industry’s equivalent of an initial public offering [IPO]), or persons otherwise engaging in the offer, sale, or distribution of digital assets, should not fail to consider whether US federal securities laws apply to such transactions.¹⁴²

On the legislative side, the most comprehensive proposal to date is the Responsible Financial Innovation Act (“the Lummis-Gillibrand bill”),¹⁴³ a federal bipartisan bill introduced in June 2022, which notably addresses the CFTC’s jurisdiction with regard to digital assets, stablecoin regulation, and consumer protection.

Commentators do not think that the bill will be enacted in 2022,¹⁴⁴ since lawmakers have been busy campaigning in their districts ahead of the midterm elections. Nonetheless, the bill establishes a sound basis to start discussions, although it provides for considerable discretion to be conferred on the CFTC, which could trigger a turf battle between the SEC and the CFTC over which is the appropriate governing body. Another bipartisan bill, the Digital Commodities Consumer Protection Act (“the Stabenow-Boozman bill”),¹⁴⁵ was introduced in August 2022. Like the Lummis-Gillibrand bill, it aims to give additional tools and authorities to the CFTC, notably to protect consumers, prevent fraud and abuse, and create transparency in the commodity marketplace.

Various states have been issuing money transmitter licences, and many are starting to enact specific laws to regulate virtual currency at the state level. New York’s BitLicense is one example, and around a dozen other states are looking to enact very similar laws that control virtual currency activities. Despite the fact that there is no significant legislation in the digital sphere at the state level, some states are taking action to enable blockchain and crypto innovation. For example, Wyoming is the first state to recognize decentralized autonomous organizations (DAOs) as separate legal entities. Therefore, Wyoming DAOs would be allowed to incorporate as LLCs.¹⁴⁶

On the executive side, the Biden administration is currently taking active measures to implement policy, by way of an executive order on March 9, 2022¹⁴⁷ laying out policy objectives for digital assets. Because of the overlapping and different views between various regulating bodies, notably the SEC and the CFTC, the executive order directs some of these federal and state government departments to coordinate and perform a broad range of regulatory actions regarding digital assets. Examples of such actions include tackling illegal digital asset activity and implementing a digital US dollar (a CBDC). The order notably tasked the US attorney general to submit a report on the role of law enforcement agencies in detecting, investigating, and prosecuting criminal activity related to digital assets. The report, issued on September 6, 2022,¹⁴⁸ recommended making it illegal for crypto services to notify customers when the government seeks their records¹⁴⁹ and expanding the statute of limitations from 5 years to 10 years for the investigation of crypto-related crimes.¹⁵⁰ On September 16, 2022, the White House outlined additional steps for the responsible development of digital assets, addressing enforcement and consumer protection in the digital space.¹⁵¹

In regard to CBDCs, the Federal Reserve Bank of New York launched Project Cedar, a multi-phase research effort to develop a technical framework for a theoretical wholesale CBDC in the Federal Reserve context.¹⁵² The recently published results of phase I of the project showed that blockchain-enabled cross-border payments can be faster, simultaneous, and safer. It was found that atomic settlement for foreign exchange transactions using DLT can happen in 10 seconds or less, significantly reducing risks.¹⁵³

Other than the above-mentioned *Ripple Labs* case, interesting cases include *Mark Shin v. Icon Foundation*,¹⁵⁴ in which a US District Court applied common-law

principles to blockchain technology and acknowledged an owner's "possessory interest" in tokens hosted on a blockchain; and *McKimmy v. OpenSea*,¹⁵⁵ an ongoing action before another US District Court in which a man alleged that the vulnerabilities of the NFT online marketplace OpenSea "allowed others to enter through its code and force the listing of an NFT" well below market value; the man is suing OpenSea for the return of the NFT as well as damages.

Europe

In June 2022, the Council of the European Union and the European Parliament reached a provisional agreement on legislation known as the Markets in Crypto-Assets Regulation (MiCA).¹⁵⁶ As of October 2022, the Council of the European Union had agreed on the full legal text of this legislation.¹⁵⁷ The European Parliament vote on the text will likely take place in February 2023.¹⁵⁸ Many commentators see this as a turning point for Europe's crypto industry.¹⁵⁹

MiCA brings digital assets, digital asset issuers, and digital asset service providers under comprehensive legislation for the first time, as it aims to regulate all crypto-related activities, especially the issuance of cryptoassets, that take place within the European Union. The legislation brings clarity given that, to date, cryptoassets have been regulated at a national level while no specific regulatory framework has existed at the broader EU level.

MiCA applies to "crypto-assets," which are defined as a "digital representation of a value or a right which may be transferred and stored electronically, using distributed ledger technology or similar technology."¹⁶⁰ However, the legislation excludes some assets such as NFTs, which will be subject to a separate regime if deemed necessary by the European Commission.¹⁶¹

The proposed legislation will also bring more stringent oversight of companies that are "crypto-asset service providers" (CASPs). For instance, CASPs will need authorization in order to operate within the European Union and will have to regularly comply with information-sharing requirements. A public register of non-compliant CASPs will also be maintained by the European Banking Authority. In addition, CASPs that are subsidiaries of companies in countries (1) on the EU list of countries with strategic deficiencies in their anti-money-laundering regimes¹⁶² or (2) on the EU list of non-cooperative jurisdictions for tax purposes¹⁶³ will be required to implement enhanced checks in line with the EU anti-money-laundering framework.

MiCA will also establish a legal framework for consumer protection by introducing the first-ever licensing regime for crypto wallets and exchanges, which is intended to prevent collapses.

Finally, MiCA does not include a ban on PoW mining, as originally proposed. However, actors in the cryptoasset market will be required to declare information on their environmental and climate footprint.

At this stage, the proposed MiCA legislation still must go through multiple steps before it is enacted into law. The text must also be formally agreed to by lawmakers

at the European Parliament, and is expected to be published in the *Official Journal of the European Union* in 2023 before taking effect in 2024.¹⁶⁴

The United Kingdom is also making strides on the regulation front with the drafting of the Financial Market and Services Bill,¹⁶⁵ which is set to become the national digital asset regulation framework.

From a judicial standpoint, the Court of Justice of the European Union (ECJ) clarified, in 2015, that buying and selling Bitcoin is exempt from value-added tax (VAT), because cryptocurrencies may be treated as foreign currencies for VAT purposes.¹⁶⁶ The following are other interesting judgments rendered by the courts of European countries:

- *United Kingdom*: In *AA v. Persons Unknown*,¹⁶⁷ Bryan J of the High Court of Justice stated, “I consider that cryptoassets such as Bitcoin are property.” In the context of this specific judgment, individuals and businesses may now obtain an injunction to freeze stolen cryptoassets since they are now classified as property under UK law.¹⁶⁸ In *Osbourne v. Persons Unknown*,¹⁶⁹ the same court extended this reasoning to NFTs and upheld an injunction to freeze stolen NFTs.
- *France*: On April 28, 2018, the country’s Supreme Administrative Court (Conseil d’État) determined that bitcoins “had the characteristics” of property and are therefore subject to capital gains tax on the disposition of movable assets.¹⁷⁰ This decision was overridden by the 2019 Finance Act, as will be examined in greater detail below. In 2020, the Commercial Court of Nanterre ruled that cryptoassets were incorporeal fungible and consumable assets.¹⁷¹
- *The Netherlands*: A civil-law lower court held that bitcoins do not qualify as “money” within the meaning of the Dutch Civil Code.¹⁷² In May 2018, the Dutch state secretary concurred with this qualification for tax purposes.¹⁷³ The court, however, noted that bitcoins may qualify as “money” in the future if they progress toward a tolerated means of regular payment.

Asian Jurisdictions

Singapore is known as one of the leading fintech hotspots in the world.¹⁷⁴ In the last quarter of 2021, Singapore was ranked by the Ireland-based fintech startup Coincub as the world leader for crypto adoption,¹⁷⁵ notably because its general support of crypto businesses and its clear regulations have been providing reassurance to crypto-shy investors. Its regulatory framework includes the Payment Services Act 2019¹⁷⁶ (“the Singapore PSA”), which came into effect on January 28, 2020. According to Singapore’s financial regulatory authority, the Singapore PSA is “a forward looking and flexible framework for the regulation of payment systems and payment service providers in Singapore. It provides for regulatory certainty and consumer safeguards, while encouraging innovation and growth of payment services and FinTech.”¹⁷⁷ Before the Singapore PSA, digital assets had not previously been defined by Singaporean legislation or jurisprudence.

The Singapore PSA notably applies to “digital payment token” dealings or exchanges. “Digital payment tokens” are defined as any digital representation of value that (1) is expressed as a unit, (2) is not denominated in any currency or pegged to any currency, (3) is intended to be a medium of exchange accepted by the public as payment, and (4) can be transferred, stored, or traded electronically.¹⁷⁸ Furthermore, “virtual asset service providers” need to meet the PSA’s licensing requirements through the Monetary Authority of Singapore.

In a judgment dated October 21, 2022, the Singapore High Court recognized NFTs as protectable digital assets and a form of legal property, not merely as information or code on the blockchain, and issued a proprietary injunction to prevent the NFT at issue in the case from being sold.¹⁷⁹

In Japan, the Payment Services Act¹⁸⁰ was amended in 2016 to recognize Bitcoin and other virtual assets as legitimate property. It requires virtual currency exchanges operating in Japan to register with the Financial Services Agency and to separately manage customers’ virtual currency apart from their own. The state of such management by the virtual currency exchanges must be reviewed by certified public accountants or accounting firms.¹⁸¹

In March 2022, Vietnam’s deputy prime minister requested the Ministry of Finance to spearhead research for the implementation of a legal framework.¹⁸² In October 2022, the prime minister called for new rules to regulate the crypto sector and to clarify the country’s stance toward digital assets and blockchain technology, which currently operate in a regulatory grey zone. The Vietnam Blockchain Association said that it is currently working with the National Assembly to propose a virtual asset tax as a first step toward recognizing virtual assets as property.¹⁸³ According to a recent report from the blockchain analytics firm Chainalysis, as of September 2022, Vietnam leads the world in grassroots cryptocurrency adoption.¹⁸⁴

Indonesia, Southeast Asia’s largest economy, is also working on regulation to better protect crypto investors. To this end, a bill was submitted in September 2022 that, if enacted, should empower the country’s Financial Service Authority (OJK) to regulate and supervise “digital asset activities, including crypto assets and financial sector technology innovation.”¹⁸⁵ In a recent parliamentary hearing, Sri Mulyani, Indonesia’s minister of finance, noted that the cryptocurrency market has faced turbulence recently, and that the country would need to “build a mechanism of supervision and investor protection that is quite strong and reliable especially for investment instruments that are high risk.”¹⁸⁶

Latin American Jurisdictions

Latin American jurisdictions have also made efforts to adopt a legal framework governing digital assets. Colombia, one of the most active Bitcoin trading countries in the region,¹⁸⁷ has adopted resolution no. 314 of 2021, providing that virtual asset service providers must periodically report user transactions starting June 1, 2022.¹⁸⁸ Argentina’s decree no. 796/2021 requires exchanges to report monthly information on their transactions, notably in order to suppress money laundering.¹⁸⁹

El Salvador made international headlines in June 2021 when it became the first country to adopt Bitcoin as legal tender.¹⁹⁰ The country is also considering a draft bill to regulate digital securities. The bill would establish a National Digital Assets Commission to oversee the regulation of digital asset issuers, service providers, and other participants involved in the “public offering process” of digital “securities.”¹⁹¹ The IMF has expressed concern over Bitcoin’s legal tender status, highlighting the “large risks associated with the use of Bitcoin on financial stability, financial integrity and consumer protection” and with issuing Bitcoin-backed bonds.¹⁹²

Middle East

In the Middle East, Bahrain and Dubai have been the only two jurisdictions to develop clear regulations governing digital assets. The Central Bank of Bahrain includes, in volume 6 of its rule book, a legislative framework governing digital assets.¹⁹³ Exchanges must undergo rigorous background checks in order to be licensed. In Dubai, Law no. 4 of 2022 was issued on March 9, 2022, and established a new authority, the Dubai Virtual Assets Regulatory Authority, as the primary virtual assets regulator in the emirate. The law defines “virtual assets” as “a digital representation of value that can be digitally traded, transferred, used as an exchange, payment toll or for investment purposes.”¹⁹⁴

International Efforts for Regulatory Action

In September 2022, the IMF released a publication titled *Regulating the Crypto Ecosystem: The Case of Unbacked Crypto Assets*,¹⁹⁵ in which the IMF calls for greater regulation of the unbacked cryptoasset market.

The IMF provides an interesting view by stating that cryptoassets were designed to disintermediate financial services; however, new types of centralized entities (such as cryptoasset exchanges and wallet providers) that offer key functions require users to trust centralized entities once again, even while these entities remain largely unregulated.¹⁹⁶ Nevertheless, the IMF recognizes that the crypto ecosystem can create potential benefits through greater competition and efficiency in some financial services, and that applying decentralized technologies to real-use cases, along with appropriate regulation, can offer consumers compelling alternatives to traditional finance.¹⁹⁷

To deal with the challenges and risks posed by the cryptoasset sector, the IMF recommended the following:

- 1) the development of common taxonomies by standard-setting bodies;
- 2) the need for access to reliable and consistent data in cryptoasset markets through greater regulation, oversight, and cross-border collaboration;
- 3) the adoption of risk-based standards (with greater requirements imposed on entities and activities that generate more risk); and
- 4) the adoption of comprehensive standards covering all important activities and entities.¹⁹⁸

The IMF makes a valid point concerning the trust that is being put in centralized cryptoasset entities within the crypto ecosystem. While the comments of many crypto critics have been validated with the collapses of Terra (Luna) and now FTX (FTT), it should be noted that these collapses have resulted from the conduct of centralized players and are not due to decentralized protocols.¹⁹⁹

International Taxation of Digital Assets

Many tax authorities around the world have issued administrative guidance on how existing legislation applies to digital assets. Some have expressly stated how they anticipate taxing digital assets and activities (for example, trading, mining, staking, and holding).

Trading and Holding of Digital Assets

In the United States, there are no tax laws that specifically deal with cryptoassets. However, the Internal Revenue Service (IRS) notes that digital assets are treated as property for federal tax purposes,²⁰⁰ and therefore they are subject to the same general tax principles applicable to any property.²⁰¹ IRS guidance is limited to Notice 2014-21,²⁰² which defines virtual currency as “a digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value.”²⁰³ The IRS’s website²⁰⁴ seems to indicate that the definition encompasses digital assets as a whole.²⁰⁵

The IRS requires crypto investors to annually disclose virtual currency activity in their tax returns,²⁰⁶ and requires investors to keep detailed records of virtual currency purchases and sales and to pay taxes on any gains derived from the sale of cryptocurrency for cash and in exchange for goods or services. Investors are also required to pay taxes on the fair market value of any mined cryptocurrency.

In the United States, digital assets can be taxed as ordinary income or capital gains, depending on the taxable event that triggers the earnings:

- *Capital gains*: Trading, selling, or swapping digital assets for fiat currency will trigger a taxable gain or loss²⁰⁷ if the digital assets that are sold are held by the taxpayer as capital assets.²⁰⁸
- *Ordinary business income*: Property that is used in a trade or business is generally not considered to be a capital asset. Income derived from trade or business activities, along with mining, staking, lending, or payments for goods or services, is considered ordinary income and is taxed according to the rate corresponding to the taxpayer’s gross income (up to a maximum of 37 percent for individuals in 2022 at the federal level).²⁰⁹

At the time of writing, the United States has only enacted legislation addressing tax-reporting requirements for digital asset “brokers,”²¹⁰ through the Infrastructure Investment and Jobs Act, adopted in November 2021, which amended the Internal Revenue Code.²¹¹

In Europe, the European Commission is preparing to hold discussions with its 27 member states on the adoption of a common tax regime for cryptoassets. Discussions with national treasuries are expected to begin in 2023, and the tax in question would likely be introduced in 2027.²¹² The following discussion highlights the current tax status in multiple European jurisdictions.

- In France, the standard tax regime applies to digital assets. As mentioned above, the country's Supreme Administrative Court (Conseil d'État) had determined in 2018 that bitcoins "had the characteristics" of property and are therefore subject to capital gains tax on the disposition of movable assets. However, the 2019 Finance Act overrode this decision by introducing a specific provision that deals with the taxation of gains derived by individuals from the occasional sale of digital assets. This legislation provides for a 30 percent flat-rate tax (composed of a 12.8 percent income tax²¹³ and a 17.2 percent social security contribution) for sales made on or after January 1, 2019.²¹⁴ On the other hand, cryptoasset gains obtained from regular or recurring trading of digital assets by individuals are treated as business income and subject to progressive income tax.²¹⁵ French tax authorities have also issued guidance with regard to the treatment of cryptocurrency trading businesses (earnings subject to income tax as business income) and mining activities (earnings subject to income tax as non-business income for individuals).²¹⁶
- In Germany, digital assets are taxed pursuant to existing general taxation rules. Administrative guidelines have been issued by the German authorities with regard to private crypto sales, the use of cryptoassets as a means of payment, the taxation of mining activities, and other topics.²¹⁷ However, in May 2022, Germany's Federal Central Tax Office (BZSt) published its first nationwide crypto tax guide. The biggest advantage for German taxpayers is that any gain from crypto held for more than a year for private (non-business) purposes is realized tax-free, even if the crypto is used for staking and lending. Regardless of what the gain is, if a taxpayer holds the assets for one year or longer before disposing of them, dispositions will not be taxed. However, dispositions of assets within one year after purchase will generally be taxed as income.²¹⁸
- The United Kingdom's tax regime currently does not specifically address digital assets. The UK tax authority, HM Revenue & Customs (HMRC), qualifies digital assets as "exchange tokens" and considers them to be taxable as assets in their own right. Their tax treatment will depend on whether they are characterized as "capital assets" or "non-capital assets," which is a fact-specific question, the answer to which will generally depend on whether the taxpayer is carrying on a business in the nature of a trade with the digital asset in question, or holding it as a capital asset. Capital assets will typically be taxable at a rate of 10 or 20 percent for individuals (depending on the individual's taxable income in the year) and 19 percent for corporations. Trading assets (non-capital assets) will be taxed at 20, 40, or 45 percent for

individuals (depending on the individual's total taxable profit for the period) and 19 percent for corporations.²¹⁹

- Italy imposes tax at a flat rate of 26 percent on profits derived from the disposition of cryptoassets if the holder's portfolio's total value exceeds €51,645.69 for more than seven consecutive days during a given taxation year. Gains realized by an Italian tax-resident individual in the context of a business activity are deemed to be business income and included in the taxable base subject to Italian personal income tax at progressive rates. However, starting in 2023, the flat-rate tax of 26 percent will be applied to gains from cryptoassets of more than €2,000 per taxation period.²²⁰
- Portugal is considered by many as the most crypto-friendly country in Europe, given that it does not yet tax cryptoasset transactions. Under the current legislation, any gains derived by individuals who are not professionally engaged in trading activities involving the exchange of cryptoassets for fiat currency should not be subject to tax.²²¹ However, in October 2022, the government announced in its 2023 state budget that, starting in 2023, it would start taxing the disposition of digital assets held for short periods of time. Profits made on digital assets held for less than one year are expected to be taxed at a rate of 28 percent, while crypto held for longer than a year will be exempt from taxes. Portuguese tax authorities will generally also consider gains from the "issuance" of cryptoassets, which includes mining and other validation of cryptoasset transactions through consensus mechanisms, as taxable income.²²²

Certain countries' authorities have classified cryptoassets into categories for tax purposes. In Singapore, the Inland Revenue Authority of Singapore (IRAS) makes interesting distinctions in its guidance²²³ between the tax treatment of payment tokens, utility tokens, and security tokens:

- *Payment tokens*: A payment token is defined as "[a] digital right that can be used or is intended to be used as a means of payment for goods and/or services. Common payment tokens include Bitcoin and Ether."²²⁴
 - The purchase of a payment token will not be considered as a taxable event.
 - Upon the disposition of a payment token for fiat currency, the taxability of the gain or loss from the disposition will depend on whether the payment token is a capital or revenue asset based on the taxpayer's intention at the time of purchase.
- *Utility tokens*: A utility token is defined as "[a] digital token that represents a right to a good or service."²²⁵
 - The purchase of a utility token is considered to be a prepayment for goods and services.
 - If a utility token is purchased in the course of a business and is redeemed for goods and services, the purchaser may claim a deduction when the token is used.²²⁶

- *Security tokens*: A security token is defined as “[a] digital token that represents a stake or an investment in an underlying asset e.g. shares in company, bonds, etc.”²²⁷
 - Any interest or dividend derived from a utility token will be subject to the usual income tax treatment. If the token was held on “revenue” account (as opposed to capital account), any gain on its disposition will be taxed. Because there is no capital gains tax in Singapore, any gain on the disposition of a token held on capital account (that is, held for long-term investment purposes) will not be subject to tax.²²⁸

Some countries, such as El Salvador, provide for crypto tax incentives for investors in an effort to encourage foreign investment.²²⁹ The legislation adopting Bitcoin as legal tender became effective on September 7, 2021. Following that date, the government announced that foreign investors would be exempt from tax on transactions involving Bitcoin that trigger both capital and income tax gains.²³⁰ El Salvador residents are also exempted from these taxes.

Other jurisdictions, such as the United Arab Emirates, do not subject resident individuals to income taxes.²³¹ Hence, such jurisdictions do not need to implement tax legislation to achieve the same result as El Salvador for resident individuals.

Because most jurisdictions do not have specific tax frameworks regarding cryptoassets, taxes on digital assets are generally levied on the basis of the tax residency of the holder.

Digital Assets Used To Pay for Goods or Services

Since most jurisdictions consider digital assets to be a form of property, tax authorities internationally seem to consider that using cryptoassets as a means of payment involves a disposition of the assets when a purchase is made.

Sellers of cryptoassets would therefore be subject to capital gains tax on the disposition,²³² and merchants who accept payment in cryptoassets will generally have to include the fair market value of the cryptoassets received in their business income.²³³

The United States, France, Germany, the United Kingdom, and Italy all share similar rules in this regard.

Mining and Staking Activities

As discussed earlier, nodes who participate in validating transactions will be rewarded. Miners who execute PoW are awarded a small number of the cryptoassets they are mining (or a different cryptoasset) every time they validate transactions on the blockchain. The same principle applies to validators staking in the context of their execution of PoS. In both cases, miners and stakers (validators) may earn a transaction fee in the form of a digital asset.

Tax authorities in most jurisdictions consider that the receipt of digital assets by miners as a result of their validation activities should be subject to tax as ordinary

income (rather than as capital gains). Such tax would be computed on the basis of the fair market value of the digital assets received.

Guidance is scarcer with respect to staking activities because this method of validation is relatively new, but it may be anticipated that tax authorities could consider that staking rewards should be taxed like mining rewards. In Germany, the income tax consequences related to mining activities will depend on whether such activities are conducted as a business or as private activities. Generally, the German tax authorities will consider such activities to be conducted as a business, given the computing resources required, although “occasional” mining can qualify as a private activity and could even be considered an entirely non-taxable hobby activity.²³⁴

In the United States, the IRS considers cryptocurrency mining activities to be taxable as ordinary activities. Mined coins will be valued at their fair market value in US dollars, and business deductions for equipment resources may be claimed, but deductions will be available depending on whether the mining activities are conducted as a business or for personal gain. The IRS has yet to issue any guidance on the tax treatment of staking activities.

Initial Coin Offering

ICOs are the cryptoasset industry’s equivalent to IPOs and provide for the creation of tokens and their sale to investors for consideration in order for a corporation to raise capital.

Currently, tax authorities seem to apply their existing tax legislation in respect of ICOs. In Canada, the taxation framework does not expressly address ICOs.

Finland is one of the jurisdictions that has issued specific tax guidance regarding the tax treatment of ICOs for investors:

ICO is a means for companies involved in a blockchain to sell their own pre-mined virtual currency to investors. If the venture is successful and the value of the virtual currency increases, the investors make a profit. In such circumstances, the investors are deemed to have purchased virtual currency and any subsequently realised increase in the value of the currency, or the investors’ other income from the currency, is subject to capital gains tax.

The terms and conditions of ICOs may vary. For this reason, investors’ tax liability is determined on the basis of the true nature of their investment, taking account of the special considerations concerning the taxation of virtual currencies. If the taxpayer-investor pays for their ICO investment by giving away some of their existing virtual-currency units, it triggers a capital-gains calculation as usual, resulting either in a taxable gain or in a deductible loss.²³⁵

Cryptoasset Airdrop

Cryptoassets deposited in a recipient’s wallet for no consideration are referred to as cryptoasset “airdrops.” Airdrops are issued similarly to the way ICOs are issued, except that the recipients of airdrops do not pay.²³⁶ Airdrops are typically made to market a new cryptoasset.

From a practical standpoint, it is often difficult to value airdropped tokens at the time of receipt, because the tokens may not yet have an assessable fair market value.²³⁷ For instance, a holder of a cryptoasset may obtain an unconditional right to a token to be airdropped even if the token has not been created yet and would, in theory, have no value.

For example, on certain exchanges, in December 2022, XRP token holders received a right to receive Flare (formerly known as Spark) tokens. A snapshot was taken of the ledger of holders at that time and each XRP token held gave a holder the right to receive a Flare token. As of today, no Flare tokens have been distributed, but they are expected to be very soon.²³⁸

The taxation of airdropped digital assets varies between jurisdictions. For instance, in Germany, airdropped cryptoassets that are not received in the course of a business should not result in taxable income.²³⁹ However, if they are received in the course of a business, they could lead to taxable income in the amount of the fair market value of the airdropped tokens, and their sale would then lead to taxable income.²⁴⁰

In the United States, if an airdropped cryptoasset has any value, it will likely be taxed as ordinary income to the recipient, and the sale of airdropped cryptoassets should be subject to the general taxation rules applicable to dispositions.²⁴¹

This prompts the following questions: What if we are in the presence of unsolicited airdrops? And what if a token has not been airdropped yet but a holder is conferred a right to an eventual airdrop?

According to IRS Rev. rul. 2019-24, airdropped tokens are taxed as ordinary income when one gains dominion and control over them (that is, when one receives them and has the ability to transfer, exchange, or sell them).²⁴² The IRS's position is based on section 61 of the Internal Revenue Code²⁴³ and the relevant jurisprudence.²⁴⁴ This means that unsolicited airdrops would be treated as taxable income. However, the IRS seems to take the position that rights conferred to an eventual airdrop would not fall within taxable income because the taxpayer has no dominion nor control over the token at that time:

Cryptocurrency from an airdrop generally is received on the date and at the time it is recorded on the distributed ledger. *However, a taxpayer may constructively receive cryptocurrency prior to the airdrop being recorded on the distributed ledger.* A taxpayer does not have receipt of cryptocurrency when the airdrop is recorded on the distributed ledger if the taxpayer is not able to exercise dominion and control over the cryptocurrency. For example, a taxpayer does not have dominion and control if the address to which the cryptocurrency is airdropped is contained in a wallet managed through a cryptocurrency exchange and the cryptocurrency exchange does not support the newly-created cryptocurrency *such that the airdropped cryptocurrency is not immediately credited to the taxpayer's account at the cryptocurrency exchange. If the taxpayer later acquires the ability to transfer, sell, exchange, or otherwise dispose of the cryptocurrency, the taxpayer is treated as receiving the cryptocurrency at that time.*²⁴⁵

The Australian Taxation Office considers the value of an established token received by airdrop to be ordinary income, and such amount will have to be declared by holders in their tax return.²⁴⁶

From a Canadian tax perspective, it is arguable that, for the issuer, the “air-dropped” cryptoasset could, in certain circumstances, be taken as a deduction—for example, because it could constitute an expense for marketing activities and therefore be incurred by the issuer for the purpose of gaining or producing income from its crypto business. However, guidance from the CRA specific to cryptoasset airdrops remains unavailable.

For the recipient, although the CRA has not published or issued any specific guidance in this regard, it appears that the existing doctrine that could apply in these circumstances is the doctrine of “constructive receipt.” According to the CRA, “constructive receipt is considered to apply in situations where an amount is credited to a person’s debt or account, set apart for or otherwise made available to the person without being subject to any restriction concerning its use.”²⁴⁷ For instance, in the context of subsection 5(1) of the ITA, a bonus would be “constructively received” in the year if the employee is entitled to it but asks for the payment to be postponed to the next year.²⁴⁸ In the context of subsection 56(2) of the ITA (indirect payments), the Federal Court of Appeal stated:

It is generally accepted that the provision of subsection 56(2) is rooted in the doctrine of “constructive receipt” and was meant to cover principally cases where a taxpayer seeks to avoid receipt of what in his hands would be income by arranging to have the amount paid to some other person either for his own benefit (for example the extinction of a liability) or for the benefit of that other person.²⁴⁹

If the doctrine of constructive receipt applied to airdropped tokens, once a token is airdropped to a holder’s account, the holder would have to include the value of the token in income; and if the holder had only been conferred a right to have a token dropped in the future, the holder would also have to include the token in income, under the constructive receipt doctrine. However, in the latter situation, the token has likely not been created yet (or, if created, it has not been exchanged on a crypto exchange). Therefore, the token would have no intrinsic value at the time the right is received (for example, in the above situation involving the airdrop of Flare tokens, the right is received by the holders at the time of the snapshot of the ledger). As a result, there would be no income tax impact for the holder at the time the right was conferred, nor at the time the token is airdropped, given that the holder was deemed to receive the right at a nil value. In this same scenario, it is only upon the sale of the airdropped token that taxation would occur, with the token having an adjusted cost base of zero.

It is important that the Canadian tax system adapt to these new technologies. Whether the doctrine of constructive receipt applies to these situations remains unclear, which is why it would be helpful for the government of Canada to set out

clear legislative guidance or administrative positions to address these novel issues. For these situations, Canada could consider applying the doctrine of “constructive receipt,” just as tax authorities in the United States did in IRS Rev. rul. 2019-24, or even consider making legislative changes to the tax rules to comfort taxpayers so that they may make sound financial decisions.

Asset Tokenization

As explained above, asset tokenization is the process by which an issuer creates digital tokens on a distributed ledger, which represent either digital or physical assets.

There is not much guidance on the taxation of asset tokenization. However, it can be anticipated that the tokenization process and the transfer of ownership of tokens could have important tax implications.

It can be anticipated that very complex issues will need to be addressed in the future. For instance, does the tokenization of a building and subsequent transfer of ownership of the tokens give the token holder partial ownership of the building according to each country’s private law? Would the tokenization process trigger a taxable disposition?

In the absence of a clear regulatory framework, it is uncertain how different jurisdiction’s private laws and taxation regimes would apply to asset tokenization.

Non-Fungible Tokens

Most jurisdictions do not have legislation regarding NFTs specifically. Guidance from various tax authorities regarding the treatment of NFTs also seems scarce. However, NFTs, just like cryptoassets, are digital assets, except that they are “non-fungible” (that is, singular and unique). In light of the case law mentioned above, such as the United Kingdom’s *Osbourne* and Singapore’s *Janesh s/o Rajkumar*,²⁵⁰ which considered NFTs as property/assets, it is likely that the tax treatment of NFTs will generally be similar to that of other digital assets.

International Efforts in Regard to Crypto Taxation (OECD’s CARF)

As discussed above, the CARF is a new tax transparency framework developed by the OECD, which provides for the automatic exchange of tax information on transactions involving cryptoassets in a standardized manner with the jurisdiction of residence of taxpayers. The CARF follows the OECD’s common reporting standard (CRS), published in 2014, which was designed to promote tax transparency with respect to financial accounts held outside the jurisdiction of residency of taxpayers. The CRS was implemented into Canadian law on July 1, 2017. The CARF is a result of consultations with various CRS participating jurisdictions, financial institutions, and other stakeholders.

During the International Fiscal Association 2022 conference round table on May 17, 2022, the CRA was asked whether it would issue guidance on “when cryptocurrency is considered situated, deposited or held outside of Canada for

foreign reporting requirements pursuant to s. 233.3 of the ITA.”²⁵¹ In response, the CRA stated that the question is still under review, and referred to the CARF soon to be adopted.²⁵² Therefore, it is expected that the CRA will rely on the CARF guidelines to align its position with respect to the reporting of foreign property in relation to cryptoassets.

The CARF was delivered by the OECD in October 2022, and includes model rules that can be transposed into domestic legislation to facilitate the international exchange of information related to taxpayers’ transactions with cryptoasset service providers.²⁵³ It consists of rules and commentary to collect information from CASPs with a relevant nexus to the jurisdiction implementing the CARF.²⁵⁴

The OECD is currently working on the legal and operational instruments (that is, an implementation package) to facilitate the international exchange of information collected under the CARF and to ensure its effective and widespread implementation.²⁵⁵ The implementation package will consist of a framework of bilateral or multilateral competent authority agreements or arrangements for the automatic exchange of information collected under the CARF, technological solutions to support the exchange of information, and a further elaboration of the requirements set out in section V of the CARF.²⁵⁶

The rules have been designed around four key building blocks:

- 1) the scope of *cryptoassets* to be covered by the CARF;
- 2) the *entities* and individuals subject to data collection and reporting requirements;
- 3) the *transactions* subject to reporting, as well as the information to be reported in respect of such transactions; and
- 4) the due diligence *procedures to identify* cryptoasset users and “controlling persons” to determine the relevant tax jurisdictions for reporting and exchange purposes.²⁵⁷

The CARF provides for reporting requirements for a wide range of cryptoassets: section IV of the CARF defines “Crypto-Asset” as “a digital representation of value that relies on a cryptographically secured distributed ledger or a similar technology to validate and secure transactions.”²⁵⁸

Subject to the CARF are “reporting crypto-asset service providers” (RCASPs), which are “any individual or Entity that, as a business, provides a service effectuating Exchange Transactions for or on behalf of customers, including by acting as a counterparty, or as an intermediary, to such Exchange Transactions, or by making available a trading platform.”²⁵⁹ This definition covers cryptoasset exchanges and brokers. Various other terms, including “entity” and “exchange transactions,” are defined in section IV of the CARF.

The CARF provides for the reporting and information sharing for the following transactions:

- transactions between cryptoassets and fiat currency;²⁶⁰
- cryptoasset-to-cryptoasset transactions;²⁶¹ and

- “reportable retail payment transactions,”²⁶² which are defined as transfers of “Relevant Crypto-Assets in consideration of goods or services for a value exceeding USD 50,000.”²⁶³

The due diligence procedures that RCASPs are required to follow under the CARF include the identification of users, the determination of users’ relevant tax jurisdictions for reporting purposes, and the collection of various other information.

To avoid duplication with other reporting regimes, the CARF allows RCASPs that are also financial institutions to rely on their due diligence procedures under the CRS, the Foreign Account Tax Compliance Act (FATCA), or other tax reporting standards for the purposes of compliance with the CARF.²⁶⁴

In the near future,²⁶⁵ it will be interesting to see whether Canada implements the CARF (which is highly likely, given the adoption of the CRS in 2017), and how it will decide to adapt the model provided by the OECD.

In light of the foregoing discussion, one may easily grasp that regulatory efforts in the digital asset sector are a work in progress often disrupted by developments in the rapidly evolving sector. With recent collapses such as the stablecoin TerraUSD (UST), Luna, and FTX’s native token FTT, there has not been a more pressing time for clear regulatory action. Establishing proper regulatory frameworks to help avoid such collapses in the future is of the utmost importance. Tax guidance must become more readily available to provide the much-needed clarity and comfort to the different actors of the digital asset world.

As mentioned by J.P. Morgan’s crypto analyst Steven Alexopoulos in a note to clients:

[W]e see the widely publicized collapse of FTX as potentially dramatically accelerating the timeline to which crypto-related regulation will be ushered in (similar to new banking regulation which followed the GFC [global financial crisis]). As a result, we see the news surrounding FTX as one step back, but one that could prove to be the catalyst to move the crypto economy two steps forward (further unlocking the utility value of blockchain). In fact, we see the establishment of a regulatory framework as the needed catalyst to massively ramp the institutional adoption of crypto. . . .

Moreover, while the news of the collapse of FTX is empowering crypto skeptics, we would point out that all of the recent collapses in the crypto ecosystem have been from centralized players and not from decentralized protocols.²⁶⁶

Lawmakers in the United States have even stated that “it was regulatory ambiguity in the U.S. that allowed FTX to grow as large as it had as an offshore exchange,” and called for Congress or regulatory agencies to provide clearer guidelines for the operation of crypto exchanges.²⁶⁷

An important regulatory response is therefore expected from countries around the world in light of the recent collapse of FTX.

Canadian Legal Framework and Tax Treatment of Digital Assets

Legal Framework

Securities

There is currently no legal framework in Canada specifically targeting digital assets. Digital assets are subject to existing legislation that may not be adapted to the sector.

Digital assets may be subject to provincial and territorial securities laws to the extent that a digital asset is considered a “security” for the purposes of those laws. For example, the Quebec Securities Act²⁶⁸ and the Ontario Securities Act²⁶⁹ both define a security to include, among other things, an “investment contract” (similar to the US Securities Act).²⁷⁰

In *Pacific Coast Coin Exchange v. Ontario*,²⁷¹ the Supreme Court of Canada identified the four attributes of an “investment contract”:

- an investment of money;
- in a common enterprise;
- with the expectation of profit; and
- that comes significantly from the efforts of others.

The Canadian Securities Administration (CSA), which aims to improve, coordinate, and harmonize securities regulations of the Canadian provinces, has noted through different staff notices (*Staff Notice 46-307* of August 2017²⁷² and *Staff Notice 46-308* of June 2018²⁷³) that, in certain cases, a coin or token may be considered a “security” for the purposes of provincial and territorial securities legislation, and that offerings must be assessed individually to determine whether they fall within the ambit of the legislation. Both staff notices refer to *Pacific Coast Coin Exchange* for determining whether an “investment contract” exists.

With regard specifically to Bitcoin, the CSA²⁷⁴ has acknowledged that “it is widely accepted that some of the well-established virtual crypto assets that function as a form of payment or a means of exchange on a decentralized network, such as bitcoin, are not currently, in and of themselves, securities or derivatives. . . . [T]hey have certain features that are analogous to existing commodities such as currencies and precious metals.”²⁷⁵ In assessing whether a particular virtual currency will be considered a security subject to Canadian securities laws, the CSA stated that it would focus on the substance of the digital asset over its form to determine whether an investment contract exists.²⁷⁶

In the context of cryptoasset trading, it can be argued that payment and utility tokens are not considered “investment contracts.” However, on the basis of the criteria established in *Pacific Coast Coin Exchange* and the definition of security tokens, these could be considered “investment contracts.”

Other Fields

Outside of securities regulation, a few recent private-law cases have addressed the treatment of cryptoassets.

For example, an *ex parte* Mareva injunction²⁷⁷ was brought without notice against the defendants in a recent case because the plaintiffs alleged that they were taking steps to move or dissipate assets that the organizers of the Freedom Convoy had raised. Some of the assets that the plaintiffs were seeking to have seized were cryptoassets held in digital wallets. In the Ontario Superior Court decision, Justice MacLeod provided his understanding of blockchain technology and analysis on whether the assets can be subject to the relief sought:

This is not the place for a detailed exploration of the nature of bitcoin or other cryptocurrencies. In summary, however, cryptocurrency is a web-based currency that is not denominated in traditional legal tender. Traditional legal currency exists either as specie (banknotes or coins) which can be carried in a physical wallet or stored in a physical location but generally is stored by depositing it with a financial institution like a bank. There the funds exist not as bundles of money in a vault or a box, but as a ledger entry which records a debt by the financial institution to the client. In the modern age, those ledgers are all electronic, stored on computer databases. In that sense, we already live in an age of digital currency, but it is currency denominated in legal tender (state backed or “fiat” currency) such as Canadian dollars.

Cryptocurrency, by contrast, is not stored in a financial institution. Bitcoin, for example, is a digital token stored on what is called an “online distributed ledger system” or blockchain. According to the expert affidavit, the defining characteristic of a blockchain is that it is an online distributed database (meaning it is stored in the “cloud” diffused over many computers or storage devices) and contains information about transactions that occur on it. A blockchain is what identifies ownership and records transactions that occur in a given cryptocurrency such as bitcoin. The person with the key (essentially the password) controls the blockchain and may be anonymous but it is an essential characteristic of the digital ledger that it can be viewed and verified. Digital transactions are therefore visible and recorded and are anonymous only to the extent that the keyholder is unknown. In fact, bitcoin transactions are all part of a public ledger that can be viewed by anyone.

Digital funds are not immune from execution and seizure to satisfy a debt any more than a bank account provided the individual or institution which can access the funds are within the reach of a court order. Digital wallets may be self controlled, but more commonly are part of a service provided by a provider and accessed through an application or software in a similar manner to online banking. Cryptocurrency exchanges are used to convert bitcoin or other currencies to fiat currency. Many of these digital institutions are within the jurisdiction of the court or are located in jurisdictions where Ontario judgments and orders may be enforced. *The defendants of course are themselves subject to the jurisdiction of the court because they are present in Ontario and they may be enjoined from cashing or transferring assets including cryptocurrency.*

*In this case, the plaintiff has clear evidence that certain of the defendants are the owners of digital wallets storing significant funds that have been amassed in bitcoin or other digital currencies. The expert investigator has been monitoring activity in these wallets and provided evidence about the steps that have been taken to break up, move and distribute those funds. In addition to the visible activity in the digital wallets, there is also considerable evidence about the plans to distribute the funds as soon as possible in part to benefit the individual protestors but also to avoid any enforcement activity. This is seen in the defendants' own communications to their supporters on social media and elsewhere. The key point for this motion is that certain of the Mareva Defendants have ownership and control of the digital wallets and they are poised to distribute or dissipate those funds.*²⁷⁸

Although some elements of this decision regarding the technological aspects of the blockchain may be argued, the court has recognized that cryptoassets can very well be subject to execution and seizure.

In *Medjedovic*,²⁷⁹ the Superior Court of Ontario granted an Anton Piller injunction against a defendant who had allegedly stolen cryptoassets from the plaintiff. In this case, the court ordered the transfer of cryptocurrency from the defendant's digital wallet to the wallet of an independent custodian. The court made an interesting comment, stating that "[i]t is enough for present purposes to find that people invested value to obtain control of the tokens that the defendant appears to have taken. The law will determine in due course whether the digital tokens are a *specie* of property."²⁸⁰

The Superior Court of Quebec, in *Autorité des marchés financiers c. Lacroix*,²⁸¹ ordered the transfer of cryptoassets to a provisional administrator in the context of litigation between Quebec's securities authority and the founder of the "plexcoin."

As of today, there has been no landmark case law specifically addressing cryptoassets, nor have Canadian courts settled on a clear doctrine defining the legal nature of cryptoassets, in particular with respect to whether they constitute "property."

However, given the increasing prevalence of cryptoassets in the Canadian financial ecosystem, it is expected that a legal framework will be established and litigation involving cryptoassets may become more common.

Canadian Income Tax

Commodities and Barter Transactions

The CRA considers cryptoassets to be commodities for the purposes of the ITA. As a result, the revenue generated on the disposition of cryptoassets should be computed as income or a capital gain for the disposing taxpayer.²⁸²

The CRA has issued guidance for taxpayers so that they may identify whether their disposition of cryptoassets should result in income revenue or capital gains, notably by explaining what constitutes "carrying on a business" in the context of activities involving cryptoassets. In its "Guide for Cryptocurrency Users and Tax Professionals," the CRA states:

The following are common signs that you may be carrying on a business:

- you carry on activity for commercial reasons and in a commercially viable way
- you undertake activities in a businesslike manner, which might include preparing a business plan and acquiring capital assets or inventory
- you promote a product or service
- you show that you intend to make a profit, even if you are unlikely to do so in the short term²⁸³

In addition, longstanding guidance issued by the CRA with regard to income generated on the sale of commodities states:

It is a question of fact as to whether gains or losses from any taxpayer's trading activities are on account of income or capital. However, it is our view that where a corporation's primary, principal, main or only activity is transacting in *commodities* or other similar *commodity* based instruments, any resulting gains or losses would be subject to income treatment as described in paragraph 5 of IT-346R. In such circumstances ordinarily gains and losses arising from the *commodity* transactions would either be income from a business carried on by the corporation or income from an adventure in the nature of trade.²⁸⁴

Commodities are tangible assets and they fit the definition of "property" under the ITA. Therefore, the CRA stating that it will treat cryptocurrencies as commodities implies that the CRA considers cryptocurrencies to be "property" for the purposes of the ITA.

Furthermore, the CRA is of the view that transactions involving cryptoassets are barter transactions²⁸⁵ and should be treated as such for tax purposes. This is because digital assets are not legal tender and exchanging them triggers a taxable event (a disposition for income tax purposes).²⁸⁶

In its "Guide for Cryptocurrency Users and Tax Professionals," the CRA states that a barter transaction "occurs when two parties exchange goods or services and carry out that exchange without using legal currency."²⁸⁷ Each person is held to consider that the value received is at least equal to the value given up.²⁸⁸

When the CRA takes the stance that transactions where "cryptocurrency" is used to pay for goods and services are barter transactions, it is implicitly taking the position that cryptoassets are property.

The CRA also took this implicit position in a technical interpretation²⁸⁹ in which it determined that digital "currency" constitutes "funds or intangible property" that is considered to be specified foreign property pursuant to paragraph (a) of the definition of "specified foreign property" in subsection 233.3(1) of the ITA. It should be noted that this stance may not be perfectly aligned with the definition of property in the ITA.

With regard to the CRA positions stated above, the authors submit the following comments. Neither "commodity" nor "commodities" is defined in the ITA.

In the industry, a commodity is considered to be merchandise or consumable goods. For instance, a dictionary on accounting and financial administration, the *Dictionnaire de la comptabilité et de la gestion financière*,²⁹⁰ defines “commodity” in multiple contexts such as commerce, securities, and economics. These definitions (in the authors’ translations) are reproduced below:

Trade; Securities.

Products, usually industrial or agricultural commodities, bought and sold in a spot market, a forward market by means of a commodity forward contract, or an organized forward market by means of a commodity futures contract.

Trade; securities.

A movable asset that can be the subject of a commercial contract; a market.

Trade; marketing.

A generally mass-produced good that cannot be significantly differentiated from one producer to another, e.g., nails or soybean oil, as opposed to a differentiated product, such as an automobile or clothing.

Economy.

Unprocessed material that is a product of agricultural, forestry, fishing, or extractive (mining, oil and gas) activity.

The Law Dictionary also defines “commodity” as “a good that is sold freely to the public. It can be agriculture, fuel, or metals. It is traded in bulk in the commodity or spot market.”²⁹¹

In addition, the Bank of Canada publishes a commodity price index for commodities produced in Canada and sold on world markets. These include, as examples, coal and natural gas in the energy sector; pulp and lumber in the forestry sector; gold and nickel in the metals and minerals sector; and potatoes, cattle, hogs, and wheat in the agriculture sector.²⁹² This listing is consistent with the definitions of commodity outlined above.

In addition, Canadian tax practitioners have suggested that the term “commodity” must be interpreted in an even narrower sense for Canadian income tax purposes:

The ordinary meaning of commodity includes any tangible personal property, which would obviously include manufactured goods. It may be, however, that for tax purposes a narrower definition that is limited to agricultural products (including forest and fish products), minerals, and currency is more appropriate. The history and context of the FAPI [foreign accrual property income] rules justify the narrower meaning.²⁹³

It is hard to see how cryptoassets could be treated as commodities when their nature is fundamentally different from that of assets that are generally considered to be commodities. Cryptoassets are not consumable goods nor are they mass-produced goods that cannot be differentiated from one producer to another.

In addition, the authors respectfully submit that it is ambiguous whether cryptocurrencies qualify as property under the ITA.

While the definition of the term “property” under the ITA is generally broad, the inclusion of new technologies or taxable legal relationships within the scope of the definition requires measured and careful consideration. Indeed, even with broad definitions, it cannot be assumed that Parliament intended to include new technologies it never specifically considered as “property” under the ITA.

In an early case dating back to the first iteration of the ITA in 1948, *David Fasken Estate v. Minister of National Revenue*,²⁹⁴ the term “property” under the ITA was interpreted in light of dictionary definitions and was considered to be one of the most “comprehensive” terms used, descriptive of “every possible interest”:

The first thing to consider is whether what Mrs. Fasken became entitled to under the declaration of trust was “property” within the meaning of the Act. The word “property” is a term of wide import. The New English Dictionary gives the following as one of its definitions:

“2. That which one owns; a thing or things belonging to or owned by some person or persons; a possession (usually material), or possessions collectively; (one’s) wealth or goods.”

And Webster’s *New International Dictionary*, Second Edition, puts it similarly as follows:

“5. That to which a person has a legal title; thing owned; an estate, whether in lands, goods, money or intangible rights, such as copyright, patent rights, etc.: anything, or those things collectively, in or to which a man has a right protected by law;”

The Courts have also recognized the wide extent of the word. For example, in *Jones v. Skinner* (1836), 5 L.J. (N.S.) Ch. 87 at 90, Lord Langdale, M.R., said:

“it is well-known, that the word ‘property’ is the most comprehensive of all the terms which can be used, inasmuch as it is indicative and descriptive of every possible interest which the party can have.”

Vide also Re Lunness [(1919), 46 OLR 320 at 332], per Riddell, J. What Mrs. Fasken became entitled to is manifest from clause (5) of the declaration of trust, namely, the right to receive from the trustees one-half of the interest on the indebtedness that should come to their hands from time to time after the interest on Andrew Fasken’s claim had been paid. In my view, the word “property” as used in the Act is clearly wide enough in meaning to include such a right.²⁹⁵

While the *Fasken Estate* case indicates that courts preferred, at least at the time, to subscribe to a broad reading of the term “property,” subsequent legislative amendments listing certain property or rights (money, forest resource properties, and, later, work in progress and the goodwill of a business) leave us wondering why these additions were made. Did legislators simply want to clarify the definition, or

did they want to add property or rights that would not otherwise be included in the definition? The answer appears to be both.

Indeed, in an important decision rendered by the Federal Court of Appeal, *Manrell v. Canada*,²⁹⁶ an extensive review of the definition of the term “property” was conducted in relation to whether payments received pursuant to the signature of a non-competition agreement could be considered to be the proceeds of the disposition of property within the meaning of the ITA.

The Federal Court of Appeal commented on the additional enumeration of “money” at paragraph (b), timber resource property at paragraph (c), and “work in progress” at paragraph (d) in the definition of “property”:

The first amendment was made in the 1972 tax reform legislation, S.C. 1970-71-72, c. 63. This was major tax reform legislation. The most substantial change was to include a regime for taxing capital gains realized on the disposition of property. One of the consequential changes was that the words in the original definition of “property” after “includes” became paragraph (a), and what is now paragraph (b) was added (“unless a contrary intention is evident, money”; “à moins d’une intention contraire évidente, l’argent.” I have not been able to discover why paragraph (b) was added to the definition of “property.” It seems likely that the change was thought necessary because of the new regime for taxing capital gains, but I can conceive of no reason for concluding that the ordinary meaning of “property” does not include money. *I have been able to find no authority on point. I conclude that paragraph (b) probably was added only for greater certainty and not to expand the statutory definition of “property” beyond its ordinary meaning.*

Paragraph (c) of the definition of “property” (the reference to timber resource property, “*les avoirs forestiers*”) was added by S.C. 1974-75-76, c. 26, subsection 125(5), applicable to the 1974 and subsequent taxation years. This amendment was consequential on the enactment of a specific regime for a special category of timber cutting rights, designed by the defined term “timber resource property.” The rights included within the definition of “timber resource property” would have been within the pre-1974 definition of “property.” *I conclude that paragraph (c) was added to the definition of “property” only for greater certainty, and not to expand its statutory meaning.*

Paragraph (d) of the definition of “property” (the reference to “the work in progress of a business that is a profession,” or “*les travaux en cours d’une entreprise qui est une profession libérale*”) was added by S.C. 1980-81-82-83, c. 148, s. 128, applicable to the 1982 and subsequent taxation years. This was consequential on amendments to section 10 of the *Income Tax Act* which, among other things, required the work in progress of a professional business to be valued at the end of every taxation year and otherwise treated as though it were inventory. Other amendments to the *Income Tax Act* were made at the same time to permit professional businesses to elect in certain circumstances to exclude the value of work in progress in income, as the principles of accrual accounting would otherwise require.

The work in progress of a professional business is simply work for which the professional hopes to be paid at a future time. It is generally reflected

in the accounts of a professional business as a sum of money representing, for example, the number of hours worked multiplied by an hourly rate. Work in progress is an asset with value, in the sense that it can be the subject of contractual terms governing the adjustment of the shares of a professional partnership in certain events, or it can be the subject of compensation if a professional business is sold. But the work in progress of a professional, by itself, generally does not entitle the professional to do or claim anything. In my view, it is not by its nature something that comes within the ordinary meaning of “property,” and it may not even be “a right of any kind.” *If that is so, then paragraph (d) must have been added to the definition of “property” to expand the statutory meaning of “property” beyond its ordinary meaning. The purpose, apparently, was to give a statutory foundation to the amendments to section 10 that required the work in progress of a professional business as though it were inventory.* This suggests that despite the apparent breadth of the definition of “property,” and in particular the inclusion in that definition of “a right of any kind whatever,” Parliament did not consider an inchoate right such as the work in progress of a professional to be within the definition as it read prior to 1982.

I can find nothing in the statutory context to support the proposition that the phrase “a right of any kind whatever” in the statutory definition of “property” is intended to require a non-exclusive, commonly held right to carry on a business to be treated as “property” for income tax purposes.²⁹⁷

Accordingly, the Federal Court of Appeal found that while “money” and “forest resources” were added to the list for greater certainty and not in order to expand the meaning of the term “property,” the inclusion of “work in progress of a business that is a profession” as paragraph (d) to the definition of “property” through legislative amendment in 1982 was made specifically to include a right that Parliament may not have considered property initially.

In this context, the *Manrell* decision deviates conceptually from *Fasken Estate* in that it argues that the list of inclusions in the definition of “property” also includes certain relationships that would not traditionally be considered property.²⁹⁸

This interpretation coincides with the explanation given to the inclusion of “work in progress” in the explanatory notes²⁹⁹ to the 1982 amendment of the ITA:

The amendment to the definition “property” is consequential on the amendments to sections 10 and 34 of the Act relating to professional work in progress. *The amended definition ensures that the work in progress of a business that is a profession is property* and will therefore fall within the rules in section 10 relating to inventory.³⁰⁰

The court’s conclusion in *Manrell* is that, in some circumstances, the addition of certain paragraphs to the definition of “property” under the ITA was made only for greater certainty and not to expand the statutory meaning of the definition, and, in one other circumstance, to expand the statutory meaning of “property” beyond its ordinary meaning in order to give a foundation to the amendments to section 10 of the ITA that required the work in progress of a professional business to be

considered as though it were inventory. It is to be noted that the court in *Manrell* shared the view of Justice Iacobucci of the Supreme Court of Canada in *Ludco Enterprises Ltd. v. Canada*³⁰¹ that “judicial innovation is undesirable” in the context of the interpretation of the ITA,³⁰² such that judges can interpret the rules set out by Parliament to elucidate certain concepts, but should refrain from promulgating new tax rules. Accordingly, the logical fallout of this judicial reserve is that all potentially “new” types of property, such as cryptoassets, should be explicitly included in the definition of property by means of a legislative amendment and not by judicial interpretation.³⁰³

It is to be noted that the Federal Court of Appeal in *Manrell* went on to mention that relevant jurisprudence should form part of the contextual considerations in determining whether a right or relationship falls within the scope of the term “property”:

It seems to me that the most important contextual considerations in this case are the (a) the ordinary meaning of the word “property,” (b) the statutory context, and (c) the relevant jurisprudence, which form part of the basis upon which Parliament determines the scope of its frequent amendments to the *Income Tax Act*.³⁰⁴

The court went on to justify its decision not to recognize a payment made pursuant to a non-competition agreement as a disposition of “property”:

It is implicit in this notion of “property” that “property” must have or entail some exclusive right to make a claim against someone else. A general right to do something that anyone can do, or a right that belongs to everyone, is not the “property” of anyone. In this case, the only thing that Mr. Manrell had before he signed the non-competition agreement that he did not have afterward was the right he shares with everyone to carry on a business. Whatever it was that Mr. Manrell gave up when he signed that agreement, it was not “property” within the ordinary meaning of that word. . . .

The fact is that in the history of tax jurisprudence in Canada, involving dozens of cases that consider the statutory definition of “property,” there is not a single case in which the word “property” has been held to include a right that is not or does not entail an exclusive and legally enforceable claim. This does not prove that the Crown’s argument is wrong, but in my view it casts serious doubt on it.³⁰⁵

The interpretation of the definition of “property” in *Manrell* leads to a potential grey zone when it comes to new technology and potentially new or unconsidered rights or relationships, including cryptoassets.

From a legislative interpretation standpoint, section 10 of the Canadian Interpretation Act³⁰⁶ must be considered:

The law shall be considered as always speaking, and where a matter or thing is expressed in the present tense, it shall be applied to the circumstances as

they arise, so that effect may be given to the enactment according to its true spirit, intent and meaning.

One could argue that cryptoassets are “property” for the purposes of the ITA by applying the “always speaking” doctrine contained in section 10 of the Interpretation Act, following which the definition of “property,” enacted in 1948³⁰⁷ long before the appearance of cryptoassets, includes “cryptoassets.”

The Federal Court of Appeal³⁰⁸ made the following statements in regard to section 10 of the Interpretation Act:

One interpretive rule that requires consideration here is the rule, codified in section 10 of the *Interpretation Act*, that “[t]he law shall be considered as always speaking [...]”

A corollary of this rule is that “[p]reserving the original intention of Parliament or the legislatures frequently requires a dynamic approach to interpreting their enactments, sensitive to evolving social and material realities”

These “evolving social and material realities” may include advances in technology that did not exist when the provision to be interpreted was enacted. . . . Here, of course, the modern internet had not yet been created, [and other advances in technology that had not occurred] when sections 16 and 21 were enacted in 1984. . . .

The question nonetheless remains whether, as the Attorney General submits, the designated judge erred in failing to take account of technological change, and in so doing took an inappropriately static, rather than a dynamic, approach to the interpretation of “within Canada.” I would answer this question in the negative.

It is not every interpretive exercise that calls for a dynamic approach. Courts have declined to take this approach where, for example, doing so would raise issues of policy more suited for legislative resolution. . . . They will also be reluctant to do so when Parliament has already addressed, albeit in a different manner, the “new social realities” on which the party seeking a dynamic interpretation relies.³⁰⁹

The authors believe that legislative clarification is required as to whether cryptoassets are “property” under the ITA, notably to avoid the situations in which Canadian courts refuse to adopt a dynamic interpretation in that regard by considering that the qualification is more suited for legislative resolution.³¹⁰

The authors emphasize their concern that a failure to consider cryptoassets to be property for the purposes of the ITA would constitute a loophole.

Taxation on Account of Income from a Business, or Taxation on Account of Capital?

It is only if cryptoassets are “property” under the meaning assigned at subsection 248(1) of the ITA that it becomes pertinent to determine whether transactions involving cryptoassets are on account of income or capital.

Section 3 of the ITA sets out the basic rules for calculating a taxpayer's income for a taxation year, and contains several subsections that are intended to provide for certain inclusions and deductions in computing income. Specifically, paragraphs 3(a) and (b) require the following calculation to be made in computing a taxpayer's income:

3 The income of a taxpayer for a taxation year for the purposes of this Part is the taxpayer's income for the year determined by the following rules:

(a) determine the total of all amounts each of which is the taxpayer's income for the year (other than a taxable capital gain from the disposition of a property) from a source inside or outside Canada, including, without restricting the generality of the foregoing, the taxpayer's income for the year from each office, employment, business and property,

(b) determine the amount, if any, by which

(i) the total of

(A) all of the taxpayer's taxable capital gains for the year from dispositions of property other than listed personal property, and

(B) the taxpayer's taxable net gain for the year from dispositions of listed personal property,

exceeds

(ii) the amount, if any, by which the taxpayer's allowable capital losses for the year from dispositions of property other than listed personal property exceed the taxpayer's allowable business investment losses for the year.³¹¹

The tax treatment of cryptoasset activities will differ depending on multiple factors. In order to determine how these activities will be taxed, an analysis must be conducted to determine whether, in the circumstances, the activities are performed on account of business income or capital.

To make this determination, the first step is to assess what a "business" is for income tax purposes.

Meaning of Business

A taxpayer's income for the year from business is determined according to the provisions of subdivision B of the ITA, "Income or Loss from a Business or Property." The first provision of this subdivision is section 9, which provides that "a taxpayer's income for a taxation year from a business or property is the taxpayer's profit from that business or property for the year."

The term "business" is defined in subsection 248(1) to include

a profession, calling, trade, manufacture or undertaking of any kind whatever and, except for the purposes of paragraph 18(2)(c), section 54.2, subsection 95(1) and paragraph 110.6(14)(f), an adventure or concern in the nature of trade but does not include an office or employment.

The foregoing is not a targeted definition of “business” but it suggests, in a non-exhaustive manner, the inclusion of activities that qualify as a “business” under the ITA. Case law such as the Federal Court of Appeal’s decision in *Canada v. Paletta*³¹² showcases how to interpret the term “business” given the lack of a rigorous definition under the ITA:

The word “business” is given an inclusive and expansive meaning under the Act (subsection 248(1)), but is left otherwise undefined. As in such circumstances, the private law—the common law on the facts of *Stewart*—fills the gap, the Supreme Court explained that the *Stewart* test gave effect to the common law definition of “business” (*Stewart*, paragraph 51):

Equating “source of income” with an *activity undertaken “in pursuit of profit” accords with the traditional common law definition of “business,” i.e., “anything which occupies the time and attention and labour of a man for the purpose of profit.”*³¹³

In *Paletta*, the court also stated that

[t]he objective of the *Stewart* test, which was to reaffirm “pursuit of profit” as the decisive consideration in ascertaining the existence of a business, precludes the possibility that this test could be construed so as to require the recognition of a business in the face of evidence that establishes that profits are not being pursued.³¹⁴

The Federal Court of Appeal’s decision in *Dansereau*³¹⁵ gave a similar definition of what constitutes a “business”: “The expansive definition of the term ‘business’ in section 248 is not exhaustive. It extends to any endeavour that occupies time, labour and attention with a view to profit.”³¹⁶

Where the activities are pursued by a corporation, there is a presumption that virtually any transaction it enters into is entered into in the course of its business for profit.³¹⁷

As a general statement in light of these decisions, it appears that the term “business” is interpreted in common law as being rather broad and encompassing activities with a view of profit. For the purposes of this paper:

- the reference to “business” in subsection 248(1) of the ITA, which includes an “adventure or concern in the nature of trade,” will be referred to as the “extended definition of business”; and
- the reference to the common-law definition of “business” will be referred to as the “private-law definition of business.”

The category into which cryptoasset transactions fall will affect their tax treatment:

- Where cryptoasset activities qualify as business activities according to the private-law definition of business or as an adventure or concern in the nature

of trade, the taxpayer's gains or losses resulting from these activities will be taxable or deductible on account of income.

- The treatment of inventory under section 10 of the ITA will differ depending on whether an activity is “an adventure or concern in the nature of trade” or a business under the private-law definition of business that is not an adventure or concern in the nature of trade.³¹⁸
- Where the activities are investment activities, the taxpayer's gains or losses resulting from these activities will be on account of capital.
- A personal activity or hobby is not a source of income and therefore is not taxable.³¹⁹

For greater clarity, figure 3 highlights the logical train of thought suggested by the authors to make the assessment and determine the tax impacts.

The next sections will focus on an analysis that can be conducted to determine whether the cryptoasset activities qualify as a “business” and, if not, whether they qualify as an adventure or concern in the nature of trade or as investment activities. First, the factors to be considered in determining whether the activities qualify as a business that is or is not an adventure or concern in the nature of trade will be examined. Then, the factors to be considered in distinguishing between an adventure or concern in the nature of trade and investment activities will be highlighted.

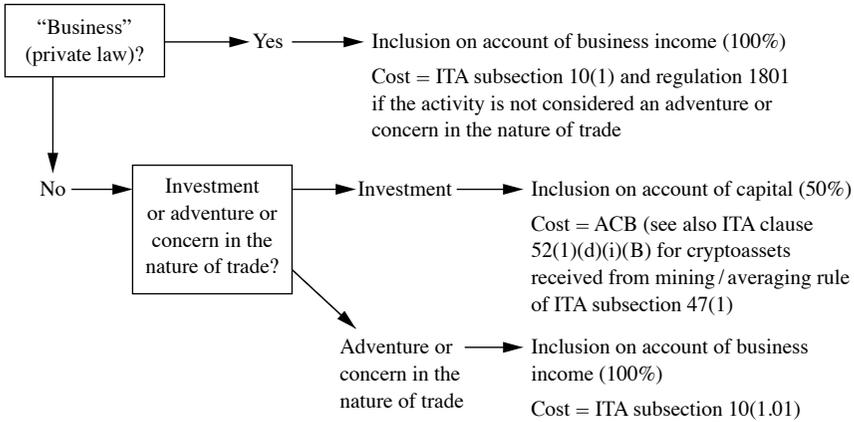
Business That Is (or Is Not) an Adventure or Concern in the Nature of Trade

In 2019, the CRA was asked to issue guidelines on its interpretation of the term “business.”³²⁰ The CRA stated, “since Parliament and the courts have given ‘business’ a very broad meaning, the CRA does not intend to give specific guidance.”³²¹ In its answer, the CRA specifically referred to the private-law definition of business stated in *Stewart*.

However, in its “Guide for Cryptocurrency Users and Tax Professionals,”³²² the CRA offers guidance as to what constitutes the carrying on of a business.³²³ As mentioned above, the common signs that a business is being carried on include the following:

- the taxpayer carries on activity for commercial reasons and in a commercially viable way;
- the taxpayer undertakes activities in a businesslike manner, such as preparing a business plan and acquiring capital assets or inventory;
- the taxpayer promotes a product or service; and
- the taxpayer shows that it intends to make a profit, even if it is unlikely to do so in the short term.³²⁴

In her article “Old Wine in New Bottles: Adventure in the Nature of Trade,”³²⁵ Grace Chow analyzed the case law to extract hints and clues that would indicate

Figure 3 Tax Treatment and Cost of Acquired Cryptoassets

ITA = Income Tax Act; ACB = adjusted cost base.

whether an activity is or is not an “adventure in the nature of trade.” Notably, she reviewed decisions from other jurisdictions because of the limited Canadian case law regarding this specific distinction. Below is a summary of the various elements, extrapolated from Chow’s text, that distinguish “an adventure or concern in the nature of trade” from a business under the private-law definition of business:

- There should be some continuity, as indicated by the frequency of the transactions or proximity in location of other similar ventures,³²⁶ *as opposed to* an isolated transaction; this is so unless the transaction is carried out as part of the taxpayer’s ordinary business.³²⁷
- The carrying on of a business generally involves the use of systematic methods with an infrastructure and proper record keeping.³²⁸ *By contrast*, it is not necessary to have a business organization or an infrastructure to carry on an adventure or concern in the nature of trade.³²⁹
- A significant amount of time spent, the magnitude of capital used, and substantial efforts at increasing profitability are all additional factors that indicate that a business is being carried on.³³⁰ *By contrast*, in an adventure or concern in the nature of trade, there is usually an element of speculation where the risk of loss, as well as a chance to profit, could be significant.³³¹
- Where the person involved in the transaction is knowledgeable and has expertise, this is an indication that the person is carrying on a business.³³² *By contrast*, carrying on an adventure or concern in the nature of trade may not require extensive knowledge or expertise in the subject matter.³³³
- If a corporation is formed for the specific purpose of carrying on a business, there is a general presumption that the profits from the activities of the corporation are the result of carrying on that business.³³⁴

Now that the factors to consider whether crypto activities qualify as either a business under the private-law definition of business or an adventure or concern in the nature of trade have been outlined, the following discussion will consider the impacts of cryptoasset activities qualifying as one or the other.

As explained above, regardless of whether the targeted cryptoasset activities qualify as an adventure or concern in the nature of trade or as a business under the private-law definition of business, the income resulting from such activities must be computed on account of business income. However, such determination will affect the treatment of inventory.

On the one hand, if the cryptoasset activity is considered a business under the private-law definition of business, the inventory at the end of the year will have to be valued, pursuant to subsection 10(1) of the ITA, at the cost at which the taxpayer acquired the cryptoasset or its fair market value at the end of the year, whichever is lower:

For the purpose of computing a taxpayer's income for a taxation year from a business that is not an adventure or concern in the nature of trade, property described in an inventory shall be valued at the end of the year at the cost at which the taxpayer acquired the property or its fair market value at the end of the year, whichever is lower, or in a prescribed manner.

The "prescribed manner" referred to in subsection 10(1) is set out in regulation 1801,³³⁵ which provides an alternative method by which a taxpayer's assets may be valued at their fair market value:

Except as provided by section 1802, for the purpose of computing the income of a taxpayer from a business, all the property described in all the inventories of the business may be valued at its fair market value.

Therefore, in the case of a "business that is not an adventure or concern in the nature of trade," it is possible for a taxpayer to write its cryptoasset inventory up or down, affecting the profit calculation for unrealized changes in value.

On the other hand, if the cryptoasset activity is considered to be "an adventure or concern in the nature of trade," the inventory must be valued at the cost at which the taxpayer acquired it, pursuant to subsection 10(1.01) of the ITA. The consequence of this treatment is that the taxpayer may not write down cryptoassets to affect the calculation of the taxpayer's profit when there is a decline in the value of the cryptoassets. Subsection 10(1.01) provides:

For the purpose of computing a taxpayer's income from a business that is an adventure or concern in the nature of trade, property described in an inventory shall be valued at the cost at which the taxpayer acquired the property.

In light of the information provided above, it must be determined which assets compose the inventory in the context of crypto activities when conducting a crypto

“business” according to the private-law definition of business or an adventure or concern in the nature of a trade.

Although cryptoassets could likely be considered inventory when they are involved in the context of trading activities conducted as a business, one may wonder if they could form an inventory in the context of cryptoasset mining activities. To make this determination, the first step is to consider the provisions of the ITA that either provide guidance as to what constitutes an inventory or provide a definition for the term.

“Inventory” is defined in two subsections of the ITA, subsections 10(5) and 248(1):

10(5) Without restricting the generality of this section,

(a) property (other than capital property) of a taxpayer that is advertising or packaging material, parts or supplies or work in progress of a business that is a profession is, for greater certainty, inventory of the taxpayer;

(b) anything used primarily for the purpose of advertising or packaging property that is included in the inventory of a taxpayer shall be deemed not to be property held for sale or lease or for any of the purposes referred to in subsection 10(4); and

(c) property of a taxpayer, the cost of which to the taxpayer was deductible by virtue of paragraph 20(1)(mm), is, for greater certainty, inventory of the taxpayer having a cost to the taxpayer, except for the purposes of that paragraph, of nil.

248(1) **inventory** means a description of property the cost or value of which is relevant in computing a taxpayer’s income from a business for a taxation year or would have been so relevant if the income from the business had not been computed in accordance with the cash method and includes

(a) with respect to a farming business, all of the livestock held in the course of carrying on the business, and

(b) an emissions allowance.³³⁶

The definition in subsection 10(5) of the ITA is of little help in our case, because it provides only a short list of examples of what could constitute inventory.

The definition of “inventory” in subsection 248(1), which applies to the entirety of the ITA, is more helpful because it indicates that inventory means “a description of property the cost or value of which is relevant in computing a taxpayer’s income from a business for a taxation year.”

The Supreme Court of Canada in *Friesen*³³⁷ provided a definition of the word “inventory”:

The plain meaning of the [“inventory”] definition in s. 248(1) is that an item of property need only be relevant to business income in a single year to qualify as inventory: “*relevant in computing the taxpayer’s income from a business for a taxation year.*” *In this respect the definition of “inventory” in the Income Tax*

*Act is consistent with the ordinary meaning of the word. In the normal sense, inventory is property which a business holds for sale and this term applies to that property both in the year of sale and in years where the property remains as yet unsold by a business.*³³⁸

In *Kruger*,³³⁹ the Federal Court of Appeal referred to *Friesen* to suggest that only property held for sale qualifies as inventory.³⁴⁰ “Inventory” was also defined in *Yorkwest Plumbing Supply*,³⁴¹ referring to *Friesen*. The decision notably states, “Subsection 10(1) only allows a write-down of ‘inventory,’ meaning goods that are held for future sale.”³⁴²

The CRA appears to have taken a position with regard to Bitcoin cryptoassets when it comes to mining activities. In fact, the CRA refers to section 10 of the ITA and states, “Where a taxpayer mines bitcoin in a commercial manner, in computing the taxpayer’s income from the business for a taxation year, the value of property described in the inventory at the end of the year must be determined.”³⁴³

However, the authors contend that cryptoassets in the context of mining activities may not constitute inventory, because the assets are received in consideration of the service of mining and do not constitute “property which a business holds for sale.”³⁴⁴ Nonetheless, legislative or administrative clarifications would be welcomed by actors in the crypto industry for greater certainty.

Where a miner receives cryptoassets in consideration for its services, and it uses those assets to engage in a cryptoasset trading activity, it should then be considered to be engaged in a separate second activity (“the second activity”). This second activity would be distinct from the mining activity and should be the subject of an independent analysis to determine whether it is conducted as a “business” according to the private-law definition of business, as an adventure or concern in the nature of trade, or as an investment activity.

If the analysis concludes that the second activity is conducted as an investment activity, the cryptoassets would be held on account of capital. Their disposition should trigger a capital gain (or loss), with the averaging rule of subsection 47(1) of the ITA applying in regard to the adjusted cost base (ACB) of the assets. If the second activity is conducted as a business according to the private-law definition of business or as an adventure or concern in the nature of trade, the cryptoassets would be held on account of business income. In such a scenario, the sale of the assets would constitute business income. In addition, the determination of the “cost” of the cryptoassets could be ambiguous, because they were received in exchange of mining services rendered. The following hypothetical scenario highlights the potential issues:

- 1) Assume that individual A, who is a resident of Canada for Canadian income tax purposes, is in the business of mining cryptoassets, and conducts the activity in a manner that makes it fall within the extended definition of business.
- 2) In consideration of mining services rendered in year X, individual A receives one cryptoasset with a fair market value of \$10,000 (“the cryptocoin”).

- 3) Individual A will realize a business income equal to the fair market value of the cryptocurrency received, and will therefore have to include \$10,000 in taxable income in his year X tax return. Thus, as per the CRA's position:

Accordingly, where a taxpayer who is in the business of Bitcoin mining receives Bitcoin as a result of their mining activities, they must bring into income the value of the services rendered or the value of the Bitcoin received, whichever is more readily valued. In most cases, we expect the value of the Bitcoin received to be more readily valued and, accordingly, this is the amount to be brought into income.³⁴⁵

- 4) In his year X tax return, individual A will be entitled to deduct from income expenses related to his mining activities (such as the cost of electricity).
- 5) In year X+1, individual A sells the cryptocurrency for \$15,000. The exercise now would be to determine whether this sale is made in the context of a business or an investment activity in order to assess whether the sale should be treated as being on account of income or capital.
- a) If the sale is treated as being on account of capital, a particular amount in respect of the property's value that was included in computing the taxpayer's income for a taxation year, throughout which the taxpayer was resident in Canada, is added to the cost of the property for the taxpayer, pursuant to clause 52(1)(d)(i)(B) of the ITA. Since individual A already included \$10,000 in his tax return for the previous year (year X), this amount will be added to the cost of the cryptocurrency. The proceeds of disposition would be equal to \$15,000. Therefore, the capital gain realized on the disposition of the asset would be \$5,000.
- b) If the sale is treated as being on account of income, the income generated as a result of the disposition of the cryptocurrency should be recorded as being on account of business income. The question that arises is, how would the \$10,000 revenue included in the individual's year X tax return affect the individual's tax liability resulting from the sale of the cryptocurrency? Could this revenue be included in the cost of goods sold? No accounting guidance appears to provide direction for this specific scenario. Legislative, administrative, or accounting guidance would help to solve this ambiguous scenario.

In its "Guide for Cryptocurrency Users and Tax Professionals,"³⁴⁶ the CRA states:

Some examples of cryptocurrency businesses are:

- cryptocurrency mining
- cryptocurrency trading
- cryptocurrency exchanges, including ATMs³⁴⁷

As explained above, the extended definition of business includes an adventure or concern in the nature of trade. When the CRA says that it considers cryptocurrency mining and trading to be a business, it does not distinguish between the private-law

definition of business and an adventure or concern in the nature of trade. However, the authors respectfully submit that cryptocurrency trading could be a business according to the private-law definition of business, an adventure or concern in the nature of trade, an investment activity, or even a personal activity or hobby, depending on the circumstances.

In its guide titled “Valuing Your Cryptocurrency,”³⁴⁸ the CRA states:

How you value your cryptocurrencies depends on whether they are considered capital property or inventory. When cryptocurrencies are held as capital property, you must record and track the cost when you acquired them, so that you can accurately report any capital gains when you sell them.

If the cryptocurrencies are considered to be inventory, you can generally value it based on:

- the cost of each item in the inventory when it was acquired; or
- its fair market value at the end of the year.³⁴⁹

However, the CRA does not mention the nuances discussed above regarding inventory valuation.

Furthermore, one issue that may raise concern is the application of subsection 47(1) of the ITA to the situation where a taxpayer holds cryptoassets both for investment purposes and for business purposes.

Subsection 47(1) ensures that all identical properties (that is, in the present case, cryptoassets that may have been acquired at different times, through different activities, and for different reasons) have an identical cost base by ascribing to each property a cost equal to the total cost of all properties, including adjustments to the cost base, divided by the number of properties in question. In *Gervais v. Canada*,³⁵⁰ the Federal Court of Appeal indicated that

the sole purpose of [subsection 47(1)] is to facilitate the calculation of the capital gain (or loss), resulting from the disposition of identical property. The rationale being that in the end—i.e.: once all are sold—the result will be the same whether the ACB is calculated based on the actual cost of each property or their average cost.³⁵¹

Therefore, it seems that where a taxpayer holds two or more identical cryptoassets on account of capital, the assets would be treated as identical properties and their ACB should be computed on an average basis.

Adventure or Concern in the Nature of Trade Versus Investment

If it is clearly determined that an activity is not a business according to the private-law definition of business, it should be considered whether the activity is an adventure or concern in the nature of trade or an investment activity. *Happy Valley Farms*,³⁵² a leading decision rendered in 1986, details the criteria to be considered

in determining whether an activity is an adventure or concern in the nature of trade or an investment activity. The Federal Court Trial Division stated:

Since income tax was introduced in Canada, a considerable amount of jurisprudence has arisen from the use of the phrase “adventure or concern in the nature of trade” used in the extended definition of business in subsection 248(1) of the Income Tax Act. This legislative provision states the “business” includes a profession, calling, trade, manufacture or undertaking of any kind whatever and includes “an adventure or concern in the nature of trade but does not include an office or employment.” *The most comprehensive analysis of the meaning of “adventure in the nature of trade” is found in Minister of National Revenue v. Taylor, [1956] C.T.C. 189, 56 D.T.C. 1125 (Ex. Ct.) where the Court set out a number of tests to be applied to determine when a transaction, which is not itself a trade or business, can be held to be “an adventure or concern in the nature of trade.” The decision makes it clear that the question to be answered, in cases of this nature is, was the asset acquired by the taxpayer as an investment or was it not. If not, then any gain realized by the taxpayer upon the sale of the asset is taxable as income.* Whether an asset was acquired as an investment is to be determined by all the facts of a particular case including, the course of conduct of the taxpayer, the nature of the subject property, the probability of the asset producing income without the need to be turned over and the similarity of the transaction in question to a trading transaction.

Several tests, many of them similar to those pronounced by the Court in the Taylor case, have been used by the courts in determining whether a gain is of an income or capital nature. These include:

1. *The nature of the property sold.* Although virtually any form of property may be acquired to be dealt in, those forms of property, such as manufactured articles, which are generally the subject of trading only are rarely the subject of investment. Property which does not yield to its owner an income or personal enjoyment simply by virtue of its ownership is more likely to have been acquired for the purpose of sale than property that does.
2. *The length of period of ownership.* Generally, property meant to be dealt in is realized within a short time after acquisition. Nevertheless, there are many exceptions to this general rule.
3. *The frequency or number of other similar transactions by the taxpayer.* If the same sort of property has been sold in succession over a period of years or there are several sales at about the same date, a presumption arises that there has been dealing in respect of the property.
4. *Work expended on or in connection with the property realized.* If effort is put into bringing the property into a more marketable condition during the ownership of the taxpayer or if special efforts are made to find or attract purchasers (such as the opening of an office or advertising) there is some evidence of dealing in the property.

5. *The circumstances that were responsible for the sale of the property.* There may exist some explanation, such as a sudden emergency or an opportunity calling for ready money, that will preclude a finding that the plan of dealing in the property was what caused the original purchase.
6. *Motive.* The motive of the taxpayer is never irrelevant in any of these cases. The intention at the time of acquiring an asset as inferred from surrounding circumstances and direct evidence is one of the most important elements in determining whether a gain is of a capital or income nature.³⁵³

Canadian Sales Tax

Sales Taxes on Transactions Involving Digital Assets

Every recipient of a taxable supply made in Canada is required to pay tax in respect of the supply at the rate of 5 percent on the value of the consideration for the supply.³⁵⁴ The 5 percent value-added tax is therefore applicable to “taxable supplies,” which are defined as “a supply that is made in the course of a commercial activity.”³⁵⁵

The first step in determining whether a supply is taxable is to establish if there is a supply in the first place.

A “supply” is the provision of property or a service in any manner, including sale, transfer, barter, exchange, licence, rental, lease, gift, or disposition.³⁵⁶ As defined in the ETA, “property means any property, whether real or personal, movable or immovable, tangible or intangible, corporeal or incorporeal, and includes a right or interest of any kind, a share and a chose in action, but does not include money.”³⁵⁷

The definition of property is expansive. It specifically excludes money, which is defined to include “any currency, cheque, promissory note, letter of credit, draft, traveller’s cheque, bill of exchange, postal note, money order, postal remittance and other similar instrument, whether Canadian or foreign, but does not include currency the fair market value of which exceeds its stated value as legal tender in the country of issuance or currency that is supplied or held for its numismatic value.”³⁵⁸

2019 Cryptocentric Legislation Pertaining to Transactions Involving Cryptoassets

On May 17, 2019, the Department of Finance released proposals to amend the ETA³⁵⁹ in order to include a commodity tax legislative framework for cryptoassets. The proposals were implemented on June 29, 2021, through Bill C-30, with the amendments being deemed to have come into force on May 18, 2019³⁶⁰ (“the 2019 ETA amendments”).

In the 2019 ETA amendments, the definition of “virtual payment instrument” was added to subsection 123(1). This definition is relevant for the purposes of the definition of “financial instrument,” which is relevant for the purposes of the

definition of “financial service,” both defined in subsection 123(1) of the ETA. Qualifying as a financial service for the purposes of the ETA is interesting, since financial services are usually considered to be exempt supplies³⁶¹ for the purposes of the ETA.³⁶² Specifically, “financial service” is defined to mean “the issue, granting, allotment, acceptance, endorsement, renewal, processing, variation, transfer of ownership or repayment of a financial instrument,”³⁶³ and a “financial instrument” is defined to include, following the 2019 ETA amendments, “a virtual payment instrument.”³⁶⁴ In light of the above, the tax treatment of a cryptoasset under the ETA depends on whether it qualifies as a “virtual financial instrument.”

The new definition of “virtual payment instrument” is reproduced in the chart below alongside the explanatory notes provided by the Department of Finance:

ETA subsection 123(1) definition of “virtual payment instrument”³⁶⁵

virtual payment instrument

means property that is a digital representation of value, that functions as a medium of exchange and that only exists at a digital address of a publicly distributed ledger, other than property that

(a) confers a right, whether immediate or future and whether absolute or contingent, to be exchanged or redeemed for money or specific property or services or to be converted into money or specific property or services,

(b) is primarily for use within, or as part of, a gaming platform, an affinity or rewards program or a similar platform or program, or

(c) is prescribed property.

Explanatory notes pertaining to the definition of “virtual payment instrument”³⁶⁶

“Paragraph (a) describes property that confers a right of any kind to be exchanged or redeemed for money or specific property or services or to be converted into money or specific property or services. For example, a security token that confers the future contingent right to be exchanged for a common share of a corporation would be excluded from the definition of ‘virtual payment instrument’ by paragraph (a).”

“Paragraph (b) describes property that is primarily for use within, or as part of, a gaming platform, an affinity or rewards program or a similar platform or program.”

“Paragraph (c) describes property that is prescribed property. (Currently, no property is proposed to be prescribed.)”

Although the definition of virtual payment instrument seems to include NFTs and coins, it is uncertain whether NFTs or tokenized assets will be considered to

fall within the scope of this definition. The explanatory notes pertaining to this definition clearly state that “a security token that confers the future contingent right to be exchanged for a common share of a corporation would be excluded from the definition.”

For Quebec sales tax (QST) purposes, Revenu Québec announced on June 14, 2019 its intention to amend the QST regime to harmonize with the GST/HST regime. The new Quebec measures reflecting the federal ones were enacted on June 8, 2022.³⁶⁷

2022 Cryptocentric Legislation Pertaining to Miners

Draft legislation released on February 4, 2022³⁶⁸ proposes to remove most crypto-asset mining activities from the GST/HST regime (“the 2022 ETA draft legislation”). Accordingly, it also clarifies the 2019 ETA amendments by substantially restricting the availability of input tax credits on activities related to cryptoasset mining. These proposals have not been enacted as of the date of this paper.³⁶⁹ Once enacted, the proposed legislation will generally be deemed to have come into force on February 5, 2022.

The 2022 ETA draft legislation defines “cryptoasset” as “property (other than prescribed property) that is a digital representation of value and that only exists at a digital address of a publicly distributed ledger.”³⁷⁰ As stated above, the ETA’s definition of “property” in subsection 123(1) excludes “money.”

The 2022 ETA draft legislation also defines “mining activity” as

an activity in respect of a cryptoasset that is

- (a) validating transactions and adding them to the publicly distributed ledger on which the cryptoasset exists at a digital address;
- (b) maintaining and permitting access to the publicly distributed ledger on which the cryptoasset exists at a digital address; or
- (c) allowing computing resources to be used for the purpose of, or in connection with, performing activities described in paragraph (a) or (b) in respect of the cryptoasset.³⁷¹

The authors note that paragraph (a) of the definition could also include staking and/or other validation activities, even though the definition is of “mining activity.” Furthermore, there is doubt as to whether “maintaining and permitting access” to a publicly distributed ledger constitutes a “mining activity” from a technological standpoint. The explanatory notes do not provide further details regarding these two elements. Another interesting observation is that these rules do not apply to the extent that the “mining activity” is performed for a person whose identity is known, provided that that person is someone other than the mining group operator.

In any event, these provisions simplify GST/HST compliance for many actors in the crypto industry. As mentioned above, the 2019 ETA amendments and the 2022 ETA draft legislation pertain to the ETA, but it will be interesting to see whether similar amendments will be made to the ITA, which could clarify many elements discussed in this paper.

Conclusion

The proliferation of digital assets in the global economy and the technological evolution behind the crypto ecosystem have occurred at such a rapid pace that they have evidently influenced decisions of governments, major financial institutions, and other corporations.

While DLT has many benefits, notably enabling faster and cheaper transactions by eliminating the need for intermediaries, the legal and tax frameworks of jurisdictions around the world have been slow to react, which creates uncertainty among the participants in the digital asset industry.

Nonetheless, the rapid growth of crypto has pushed Canada to speed up the adoption of regulation.

On the tax side, the adoption of crypto-specific legislation would clarify many current uncertainties and would be in line with the well-established principles of predictability, certainty, and fairness in tax law, which have recently been reiterated and emphasized by the Supreme Court of Canada.³⁷² As ETA amendments have already been enacted, crypto-specific legislation with respect to the ITA is encouraged and expected.

Notes

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- 22 Binance Academy, definition of “token” (<https://academy.binance.com/en/glossary/token>).
- 23 Karl Montevirgen, fact-checked by Doug Ashburn, “Altcoins, Coins, and Tokens: What’s the Difference?” *Britannica Money* (www.britannica.com/money/what-are-altcoins-tokens). With respect to the last paragraph of this citation, the authors believe that the term “cryptoasset” should be used instead of the term “cryptocurrency” when referring to cryptocurrencies and cryptotokens, in accordance with the analysis in the section of this paper titled “Use of Adequate and Accurate Terminology.”
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- 34 *Ibid.*, at 116 (emphasis added).
- 35 Currency Act, supra note 30, sections 7, 7.1, and 8.
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- 38 Currency Act, supra note 30. See also Bank of Canada, “About Legal Tender” (www.bankofcanada.ca/banknotes/about-legal-tender).
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- Bitcoin miners also earn fees from transactions. Every transaction may include a transaction fee, in the form of a surplus of bitcoin between the transaction’s inputs and outputs. The winning bitcoin miner gets to “keep the change” on the transactions included in the winning block. Today, the fees represent 0.5% or less of a bitcoin miner’s income, the vast majority coming from the newly minted bitcoins. However, as the reward decreases over time and the number of transactions per block increases, a greater proportion of bitcoin mining earnings will come from fees. After 2140, all bitcoin miner earnings will be in the form of transaction fees.
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- 368 Canada, Department of Finance, “Legislative and Regulatory Proposals Relating to the Excise Tax Act,” supra note 47.
- 369 In its 2023 budget, the government of Canada confirmed its intention to proceed with the “Legislative Proposals Released on February 4, 2022 with Respect to the Goods and Services Tax/Harmonized Sales Tax Treatment of Cryptoasset Mining.” Canada, Department of Finance, 2023 Budget, Tax Measures: Supplementary Information, March 28, 2023, at 49.
- 370 See Canada, Department of Finance, “Legislative and Regulatory Proposals Relating to the Excise Tax Act,” supra note 47, at part 1, section 3.
- 371 Ibid.
- 372 *Canada v. Alta Energy Luxembourg SARL*, 2021 SCC 49.