THE TAX IMPLICATIONS OF CRYPTO ASSETS AS PER THE INCOME TAX ACT 58 OF 1962 FROM A SOUTH AFRICAN PERSPECTIVE

Andrzej Marek

Student Number: 803954

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Commerce (Specialising in Taxation)

Johannesburg 2022

Abstract

Crypto assets have characteristics akin to those of virtual and financial products. They are currently utilised in payment transactions, financial instruments, investments, and corporate coupon bonds[1] (The World Bank, 2017; HM Treasury et al., 2018; FCA 2021). These types of assets can be thought of as intangible digital assets whose creation, sale, or transfer are controlled by cryptographic technology and are shared electronically via a distributed ledger (Bartolucci & Kirilenko, 2020).

Crypto assets are purchased for different reasons, such as speculative investing (a perceived increased future value), as a medium of exchange in facilitating transactions for goods and/or services, or for access to specific products, services, and utilities (Intergovernmental Fintech Working Group, 2021). Guidance on crypto assets issued by the Financial Conduct Authority of the United Kingdom (Financial Conduct Authority of the United Kingdom, 2019) categorises crypto assets into three different classes, namely Utility, Security and Exchange Tokens.

The report aims to gain a comprehensive understanding of the commercial and economic substance of crypto assets and use this as a guide on how crypto assets should be taxed from a South African perspective. Further to this, the report analyses the separate classes of crypto assets available to taxpayers, namely, asset backed tokens, utility tokens and security tokens, and provides insight into the tax treatment of these specific classes.

South Africa has adopted a stance in which the tax implications are dependent on the intention of the taxpayer. If the taxpayer regularly sells crypto assets, the presumption is that the taxpayer's intention is to make a trading profit and taxable as a revenue profit (Haupt, 2022), whereas, if the taxpayer neither sells, exchanges nor spends the crypto asset, the indication is that taxpayer is holding it as a store of value and therefore as a capital asset (Haupt, 2022) and this is subject to Capital Gains Tax.

Key Words: crypto assets, cryptocurrencies, corporate income tax, capital gains tax, financial instrument, gross income, bitcoin, assets, token

Declaration

I declare that this research report is my own unaided work. It is submitted in partial fulfilment of the requirements for the degree of Master of Commerce (Specialising in Taxation) at the University of Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination at any other university.

_____

Andrzej Marek

_____ day of _____ 2022.

Table of Contents

Abstract ..... **i**

List of Figures ..... **v**

List of Tables ..... **v**

Glossary of Terms ..... **vi**

Chapter 1: Introduction **1**

1.1 Background 1

1.2 Significance of Study 4

1.3 The Statement of the Problem 5

1.4 Research Methodology 6

1.5 Scope and Limitation 7

Chapter 2: Concept and Nature of Crypto assets **8**

2.1 Definition of Crypto Assets 8

2.2 Distributed Ledger and Blockchain Technology 9

2.3 Crypto assets token classification 11

2.4 Analysis of the commercial and economic substance of various crypto assets 13

Chapter 3: United Kingdom framework for the taxation of Crypto assets **17**

3.1 United Kingdom's definition of Crypto assets 18

3.2 Regulatory framework governing crypto assets from a United Kingdom perspective 18

3.2.1 E–Money Tokens *20*

3.2.2 Security Tokens *20*

3.2.3 Utility Tokens and Exchange Tokens *20*

3.3 Taxing implications for Individual Taxpayers 21

3.4 Taxing implications for Corporate Taxpayers 25

3.5 Analysis of taxing implications of Crypto Assets from a United Kingdom Perspective 27

Chapter 4: European Union framework for the taxation of Crypto assets 29

4.1 European Union's definition of Crypto asset 30

4.2 Regulatory Framework governing Crypto assets from a European Perspective 30

4.2.1 Issuers of Crypto Assets 31

4.2.2 Crypto Assets Service Providers 33

4.3 Taxing Implications of crypto assets from a European Union perspective 33

4.3.1 Taxing Implications of Crypto Assets from a French Perspective 34

4.3.2 Taxing Implications of Crypto Assets from a German Perceptive 37

4.4 Summary 40

Chapter 5: Taxation of Crypto assets from a South African perspective. 43

5.1 Background on regulatory framework regarding crypto assets in South Africa 43

5.1.1 Description of Uses of Crypto Assets in South Africa 45

5.2 Crypto Asset Classification: Currency vs Asset 50

5.3 Capital vs Revenue in nature 52

5.3.1 Intention 52

5.3.2 Gross Income 53

5.3.3 Capital in Nature 57

5.4 Analysis and Findings 62

5.4.1 Crypto Assets held by the Taxpayer for Professional Trading Purposes 62

5.4.2 Crypto Assets held by the Taxpayer for Investment Purposes 63

5.4.3 Crypto Assets held by the Corporate Taxpayers 64

Chapter 6: Conclusion 66

6.1 Introduction 66

6.2 Summary of Key Findings: 66

6.3 Implications and recommendations 70

6.4 Contribution and areas of future research..... 72

References 73

List of Figures

Figure 1: Cryptocurrency and Corruption: Auditing with Blockchain……..12

List of Tables

Table 1: Economic characteristics of crypto assets…….……...15

Table 2: Comparative analysis of tax approaches……...44

Table 3: Key Findings……73

Glossary of Terms

Term	Description
Blockchain	A type of distributed ledger where data blocks representing individual transaction details are stored in a ledger. A complex computerised method is used to attach a new information block to the chain of pre-existing blocks.
Cryptography/Cryptographic	The conversion of data with the use of encryption algorithms into private code, commonly used for transmission over a public network.
Crypto assets	A type of asset that is kept in digital form. It provides an opportunity to utilise encryption without it representing a financial demand or obligation on the part of any identifiable entity.
Cryptocurrency	Cryptocurrency is virtual currency, which is both guarded by the use of cryptography and is exchangeable for fiat currency.
Digital Token	A digital representation of an interest, a right to receive a benefit or perform a specified function.
Distributed ledger technology (DLT)	Technology that makes it feasible to repeatedly duplicate the transaction ledger digitally. Public-key cryptography and private keys, which are used for transaction authentication and encryption, form the foundation of the distributed ledger technology (DLT).
Initial coins offerings (ICOs)	A process through which enterprises, developers, or any individuals raise capital for their intended future projects in exchange for crypto assets that they create.
Utility type token	A form of crypto asset that serves some sort of "utility" other than simply a means of trade or payment for goods or services from other sources.
Payment type token	A form of crypto asset designed to be exchanged or utilised as payment for items or services outside the environment of Distributed Ledger Technology on which they are based.
Private key	Private Keys enables the sending of crypto assets. Anyone in possession of this key has sole access to the funds.
Public key	A public key is the identifier that allows receipt of any transferable crypto asset.
Security type token	A digital token based on blockchain technology that is akin to the characteristics of a traditional security.

Chapter 1: Introduction

1.1 Background

"Paper money is going away… and crypto is a far better way to transfer value than pieces of paper…" This comment by Tesla CEO, Elon Musk, highlights the ever-growing influence of cryptocurrencies on the world payment ecosystem (Kelly, 2019). At the start of 2020, approximately 5,100 crypto assets were recorded in existence with a total market capitalisation exceeding $250 billion (Houben, 2020) with commentators citing that cryptocurrency are becoming more common and integrated into society than ever seen before (European Central Bank, 2012, 2015).

Crypto assets are defined as:

> "a *digital representation of value that is not issued by a central bank, but is traded, transferred, and stored electronically by natural and legal persons for the purpose of payment, investment, and other forms of utility, and applies cryptography techniques in the underlying technology*" (Intergovernmental Fintech Working Group, 2020)

Crypto assets have characteristics akin to those of virtual and financial products. They are currently utilised in payment transactions, financial instruments, investments, and corporate coupon bonds[2] (The World Bank, 2017; HM Treasury et al., 2018; FCA 2021). The European Banking Authority classifies crypto assets into three types, namely investment tokens, exchange/payment tokens and utility tokens (European Banking Authority, 2019).

The Organisation for Economic Co-operation and Development (OECD) defines a crypto asset as a digital representation of value that is reliant on cryptographically secured distributed ledger in order to validate and secure the transactions (Organisation for Economic Co-operation and Development, 2022). Crypto assets, such as Bitcoin, are assets in the normal sense (Haupt, 2022). They are a right or a bundle of rights that an individual can possess and are recognised as an asset, originally used as a medium of exchange (Haupt,

[2] Corporate bonds are debts issued by industrial, financial, and service companies to finance capital investments (Kumar, 2014). This form of bond allows corporations to fund specific projects and it also serves as part of the capital structuring of the company (Williams, 2011).

2022). However, a shift of use has led to crypto assets being held mainly for investment and speculation purposes (Haupt, 2022).

These types of assets can be thought of as intangible digital assets whose formulation, expedition, or transfer are controlled by cryptographic technology and are shared electronically via a distributed ledger (Bartolucci & Kirilenko, 2020). Additionally, since the residential unit holding them can be identified and the economic benefits are generated to the holder in terms of holding gains or losses, crypto assets can be regarded as economic assets (Treatment of Crypto Assets in Macroeconomic Statistics, 2022).

Cryptocurrencies are becoming widespread throughout the world's economy (Hileman & Rauchs, 2017), with cryptocurrency exchange, Luno, estimating that 15% of South Africans have cryptocurrency holdings (Nowosenetz, 2022). Due to major price increases in cryptocurrencies like Bitcoin and the recognition by consumers and businesses of the potential of such digital currencies for usage in their daily lives and operations, public awareness of cryptocurrencies has substantially expanded (van der Zwan, 2018).

There is no consensus about the nature of crypto assets and, as a result, there is no consensus on the specified approach on the taxation crypto assets (Akins et al., 2014; Global Legal Research Directorate Staff, 2014). There are no particular laws or rules governing the possession and usage of virtual currencies in South Africa. Consequently, consumers of these virtual currencies have no legal protection (National Treasury, 2014) with the application of cryptocurrency in an economic context remaining significantly untested from a tax perspective in South Africa (Lobban, 2018). Taking this into consideration, the National Treasury of South Africa has formally acknowledged crypto assets as a new financial innovation with recommendations to accommodate it within the regulatory framework, where appropriate and sufficient regulatory safeguards should be implemented (Intergovernmental Fintech Working Group, 2020).

In the 2018 Budget Review, the South African Revenue Service (SARS) indicated that they were intent on collecting tax on cryptocurrency transactions and preventing tax fraud (van der Zwan, 2018). Furthermore, SARS commissioner, Edward Kieswetter, confirmed that undisclosed holdings of crypto assets will be a focal point for the tax agency in the 2021 year of assessment (Business Insider SA, 2021). SARS stance on crypto assets is outlined in a Question-and-Answer session in which the organisation has stated that transactions or

speculation in crypto assets is subject to the general principles of South African tax law and taxed accordingly.

On the 21st of January 2021, the Taxation Laws Amendment Act 23 of 2020 was promulgated. The Taxation Laws Amendment Act 23 of 2020 has amended the definition of a "financial Instrument". Included in the definition is:

> *The substitution in subsection (1) for paragraph (f) of the definition of ''financial instrument'' of the following paragraph: ''(f) any [cryptocurrency] crypto asset;'' (South African National Treasury, 2021). This move by National Treasury is one of a very few responses to the existence of crypto assets by South African regulatory authorities.*

The Intergovernmental Fintech Working Group released a position paper on crypto assets on June 11, 2021. According to the document, crypto assets will be regulated in South Africa in a phased and organized manner. (Intergovernmental Fintech Working Group, 2021). The release of the position paper suggests that South African regulators have identified growth in the crypto asset market in South Africa.

The fact that cryptocurrency, specifically Bitcoin, representing a new asset class (Ram, 2019), presents multiple challenges to SARS as neither SARS, nor other tax regulators, have notable experience in taxing cryptocurrencies and preventing tax evasion with regards to cryptocurrency (South African Accounting Association, 2021). This research aims to add to the minimal research done on the challenges related to the taxation of different classes of crypto assets available to taxpayers.

Stakeholders operating in various financial markets have realised that the adoption of crypto assets is likely to have serious implications for both financial market infrastructure and the relationships between various market participants (Blandin, 2019). Crypto assets are often dismissed as speculative investments and are viewed as being far from adopted by mainstream participants (Whittaker, 2018). The reality suggests that the underlying blockchain technology utilised by these assets is increasingly being accepted as a driver of economic change (Whittaker, 2018). Grouping of all crypto assets into a single unified term of 'cryptocurrencies' seriously undermines the application and uses of crypto assets (Whittaker, 2018).

Crypto assets operate within a regulatory void while providing financial service activities − they are a form of financial technology innovation that may impact the financial sector

(Omar, 2021). These factors may create conditions for regulatory arbitrage, which, in turn, creates various levels of risk exposure (Omar, 2021). Numerous regulatory bodies suggest incorporating crypto assets into the current regulatory framework when there are enough and acceptable regulatory safeguards in place, acknowledging that they constitute a new financial innovation (Intergovernmental Fintech Working Group, 2020).

1.2 Significance of Study

There is research on Bitcoin in the spheres of information technology (Reynolds & Irwin, 2017), legality (Gamble, 2017) and accounting (Ram, Maroun & Garnett, 2016). In a tax context, research has been conducted to develop a taxation policy for Bitcoin (Ram, 2018). However, research into the taxation policy of various crypto asset classes has yet to be explored from a South African perspective.

This research contributes to the limited body of work on the regulation and taxation of crypto assets from a South African perspective. This research responds to the call from Basson (2020) for further research pertaining to the normal tax treatment of another crypto-asset. A comparative analysis is warranted due to tax authorities of various other jurisdictions having established extensive guidance on the tax treatment of cryptocurrency transactions (Basson, 2020). The report looks to further extend on research conducted by Ram (2018) on the taxing implications of bitcoin by extending the scope to the taxing implications of crypto assets. In his conclusion, Ram (2018) calls for more interpretive techniques to be implemented to provide further insight into the taxation of Bitcoin.

The aim of this report is to analyse the classification of the different classes of crypto assets and examines at a comparative analysis level, the current regulatory developments of three separate jurisdictions to establish the taxing implication of crypto assets from a first world and third world perspective.

Tax policy looks to improve and contribute to the transparency and certainty in the cryptocurrency space. Clear tax rules need to be established to encourage and monitor compliance and reporting, allowing various countries to access more information on transactions and assisting them to detect illegal activities (The Organisation for Economic Co-operation and Development, 2022). A comparative analysis of the taxing implications of crypto assets seeks to ensure that the approach adopted by South African taxing authorities is aligned with that of the stance adopted by first world countries such as France, the United

Kingdom and Germany. This alignement seeks to set a tax policy in place by which to improve the reporting and exchange of information with respect to crypto assets and the exchange of information between tax authorities, with respect to persons engaged in certain transactions involving crypto assets (The Organisation for Economic Co-operation and Development, 2022).

1.3 The Statement of the Problem

The report aims to gain a comprehensive understanding of the commercial and economic substance of crypto assets and use this as a guide on how crypto assets should be taxed from a South African perspective. This report analyses the separate classes of crypto assets available to taxpayers, namely, asset backed tokens, utility tokens and security tokens, and provides insight into the tax treatment of these specific classes. The report further evaluates how crypto assets are currently taxed within the context of South Africa, the United Kingdom and the European Union. The European Union is the second largest market in relation crypto assets after the United States with the United Kingdom holding a unique position as the central hub of the global financial markets (Huang, 2020).

The authorities in the United Kingdom and the European Union have established regulatory frameworks pertaining to the regulations of crypto assets (Huang, 2020). In response to the risks of regulatory fractioning and regulatory adjudication, Markets in Crypto-assets provides a comprehensive administrative framework based on current financial regulation, in which the application is applied to persons who issue crypto assets or provide services related to crypto assets in the vicinity of the European Union.

The sub-problems are as follows:

1. Establish an understanding of the commercial and economic substance of crypto assets that are available on the market for trade and investment purposes. The research establishes the various categories of crypto assets and analyses the substance of the different classifications of crypto assets.
2. Establish an understanding of the tax treatment applied to crypto assets, at any point in time, being held and disposed of as trading stock, or as capital with reference to the provisions of the Income Tax Act 58 of 1962. The research explores the tax consequences of transactions involving crypto assets from the perspective of individual taxpayers and corporate taxpayers.

3. Analyse the legal status of crypto assets from the perspective of the European Union and the United Kingdom with specific focus being placed on the taxing regulatory framework provided by each state. Analysis is conducted on the framework established and published regarding the tax implications of crypto assets.
4. Conduct a comparison of the current regulatory tax framework established within South Africa with the regulatory tax framework of the United Kingdom and the European Union. The United Kingdom and the European Union have recently introduced established regulatory framework in regard to the treatment of crypto assets.

1.4 Research Methodology

Limitation of direct prior research on the existing taxation of crypto assets in South Africa, in addition to the ambiguous tax position described above, means that the research follows an interpretive approach (Creswell, 2014). An interpretive and qualitative method approach is followed. The traits of crypto assets are determined through a review of the literature, followed by the determination of key taxation regulatory frameworks, using a multi-jurisdictional view where the jurisdictions were determined using the latest regulatory framework adopted by these jurisdictions. This discussion is accompanied by an analysis of commercial and economic substance of various crypto assets under Chapter 2.

A thematic content analysis is used to analyse the taxing regulatory framework. Thematic content analysis involves the search for certain identified themes common to a specific topic with the aim of determining possible trends and patterns (Steenkamp & Northcott, 2007).

Further to this, a comparative analysis of other countries' tax regulatory framework is conducted to make a recommendation or provide a solution, based on the research question that has been identified. Interpretative research is conducted to interpret and demonstrate the relationship that exists in the current regulatory framework (Segal, 2019).

An extensive literature review and analysis is undertaken that includes the following sources:

- Books;
- Case Law;
- Electronic Databases;
- Electronic Sources – internet;

- Journals;
- Magazine articles;
- Publications; and
- Statutes.

Relevant data was gathered for the data collection by conducting online searches for specific key terms associated with the report's topic. The relevant sections in the Act were analysed as well as the relevant sections and certain topics related to the research topic in certain publications.

1.5 Scope and Limitation

The scope of the research is focused on the tax consequences of crypto assets from a Revenue vs Capital in nature perspective. The paper deals with gaining an understanding of what crypto assets are and the complexities surrounding the commercial substance of crypto assets. The current taxation regime for crypto assets in South Africa and other jurisdictions is analysed as well. The research addresses the income tax, capital gains tax and any other tax consequences that may arise on the holding of crypto assets for the purpose of investment, capital appreciation and the use of a means of exchange.

Limitations applied to the scope of research do not include the provisions under the Value Added Tax (VAT) act. VAT implications involving the use of cryptographic assets are excluded from the research paper. From a VAT perspective, the 2018 TLAB added the issue, acquisition, collection, buying or selling or transfer of ownership of any cryptocurrency to the definition of exempt “financial services” in the VAT Act. The dealing in crypto assets itself therefore currently does not give rise to VAT (Crypto Assets: How you are taxed, 2022).

Chapter 2: Concept and Nature of Crypto assets

2.1 Definition of Crypto Assets

Over the course of its brief existence, the cryptocurrency market has changed in an inconsistent manner. More than 550 cryptocurrencies have been created since the public launch of the most popular cryptocurrency, Bitcoin, in January 2009 (Farell, 2015). The first, still the largest, and one of the most significant crypto assets developed is Bitcoin (Söderberg, 2018).

Satoshi Nakamoto (unknown., n.d.), purportedly the father of Bitcoin, released a white paper titled: "*Bitcoin: A Peer-to-Peer Electronic Cash System*" which details a primarily peer-to-peer version of electronic cash that would enable users to conduct online payments to be sent directly, without flowing via a financial institution, from one party to another (Nakamoto, 2008). The published paper by Nakamoto led to the creation of crypto currencies. Crypto assets are not currently defined under the Income Tax Act of 1962 (ITA); however, the ITA was amended to include crypto – currencies in the definition of financial instrument as defined under Section 1 on the 21st of January 2021, with the Taxation Laws Amendment Act 23 of 2020 being promulgated into law.

The Intergovernmental Fintech Working Group (IFWG), was formed in 2016, compromising representatives from the National Treasury (NT), South African Reserve Bank (SARB), Financial Sector Conduct Authority (FSCA), National Credit Regulator (NCR), Financial Intelligence Centre (FIC), and South African Revenue Service (SARS). The IFWG's conclusion points to the need for a staged approach to bring crypto assets within South African regulatory control, as they cannot continue to be outside the regulatory scope of South Africa (Intergovernmental Fintech Working Group, 2021).

The IFWG proposed a definition on crypto – assets that can be defined as follows:

> *"Crypto assets are digital representations or tokens that are accessed, verified, transacted, and traded electronically by a community of users. Crypto assets are issued electronically by decentralised entities and have no legal tender status, and consequently are not considered as electronic money either. It therefore does not have statutory compensation arrangements. Crypto assets have the ability to be used for payments (exchange of such value) and for investment purposes by crypto asset users. Crypto assets have the ability to*

function as a medium of exchange, and/or unit of account and/or store of value within a community of crypto asset users".

Furthermore, the European Central Bank defines a crypto asset as

"a new type of asset recorded in digital form and is enabled by the use of cryptography that is not and does not represent a financial claim on, or a liability of, any identifiable entity" (Chimienti, Kochanska & Pinna, 2022).

According to SARS,

"*A crypto asset is a digital representation of value that is not issued by a central bank, but is traded, transferred and stored electronically by natural and legal persons for the purpose of payment, investment and other forms of utility, and applies cryptography techniques in the underlying technology*" (Crypto Assets & Tax | South African Revenue Service, 2022).

2.2 Distributed Ledger and Blockchain Technology

Cryptocurrency is based on a shared ledger technology (Birch et al., 2015; Lobban, 2018), which regularly takes the form of a blockchain, or form distributed ledger technology (Iansiti, 2017; Bashynska, 2019). Additionally, a crypto asset is a sort of asset whose intrinsic value is primarily dependent on cryptography and distributed ledger technology (G7 Working Group on Stablecoins, 2019).

The first cryptocurrency employing a public distributed blockchain, Bitcoin, was implemented in 2009 and Satoshi Nakamoto's white paper "Bitcoin: A Peer-to-Peer Electronic Cash System" published in 2008 laid the groundwork for the usage of blockchain technology (Lausen, n.d.). Using distributed ledger technology, a blockchain is a decentralized distributed database that is maintained by a network of computers (Hacker, 2017; Rohr, 2017). Using cryptographic procedures and mathematical verifications, users are able to conduct pseudonymous transactions over a network of untrusted participants due to robust and authenticated data (Hacker, 2017; Rohr, 2017).

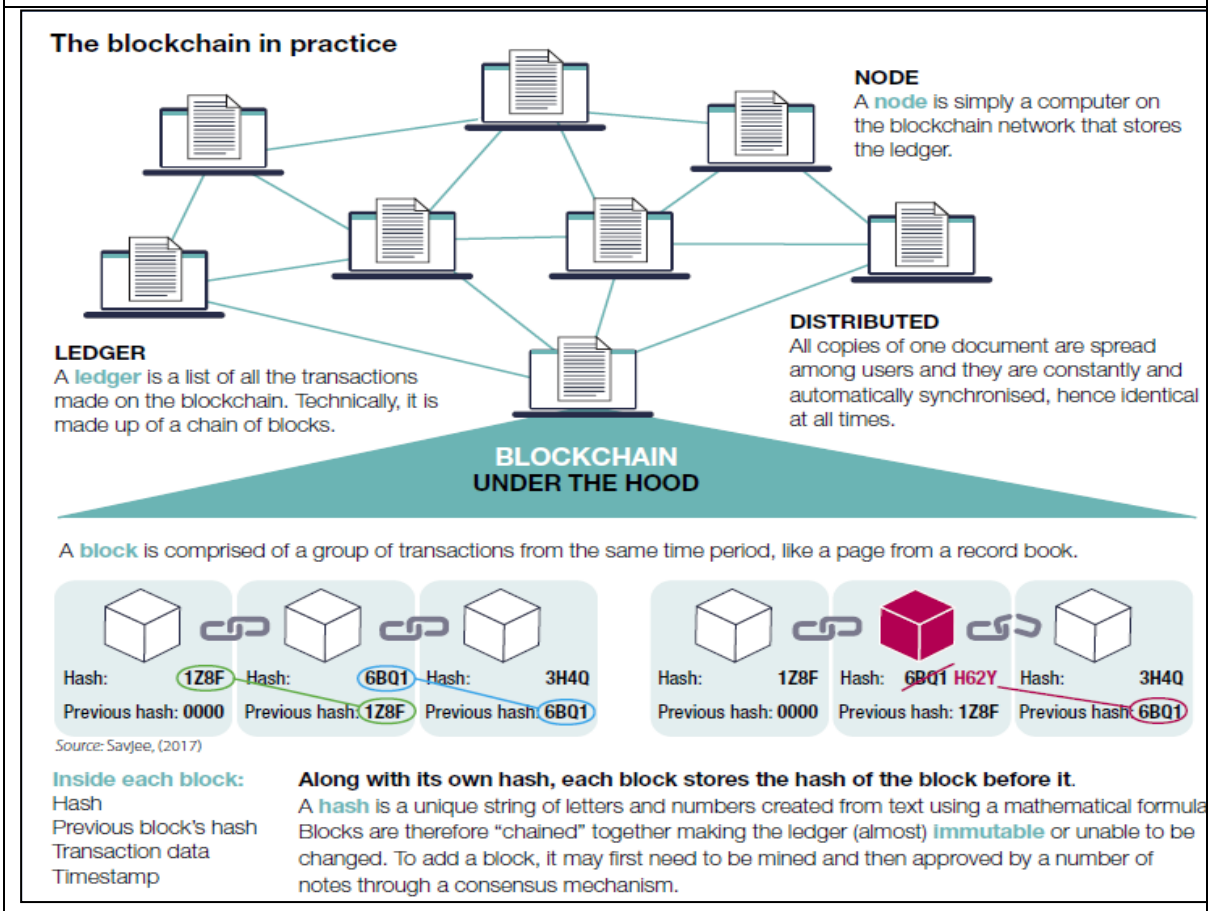
The term distributed ledger technology (DLT) describes a method of storing and distributing several ledgers that contain the same data records and are collectively maintained by a distributed network of servers known as nodes. (Natarajan, 2017). Essentially, this is a record of information that is exchanged without the requirement for validation over a network

nor regulation. It may take the form of an open database with content that is accessible to all users, or it may be restricted to a subset group of users with the content only being available to those participants associated with the group (Bullmann, 2019). The technology behind a distributed ledger is an innovative form of infrastructure in which everyone is able to gain access to or can be accessed by a defined user.

While the focus of first generation blockchain is to create a platform for enabling financial transactions with the use of cryptographically backed technology, the second generation looks at enabling programmes to utilise and run on the actual blockchain (Fridgen et al., 2018). A form of distributed ledger technology known as blockchain uses a variety of algorithmic and cryptographic techniques to construct and validate a certain subset of data structures in the form of a chain of so-called "transaction blocks," which performs the role of a ledger (Natarajan, 2017).

Bitcoin is a decentralised system where individuals can join a distributed network of servers and interact with each other to make payments and produce units of new crypto assets (Bashynska, 2019). The system operates according to a number of rules, the so-called Bitcoin protocol (Bashynska, 2019). Bitcoin protocol stipulates the ways and means by which communication within the Bitcoin network must take place. It primarily contains standardised guidelines on how messages of all types should be formatted (Schar, 2020).

Figure 1 illustrates how blockchain technology works in practice.



(Kaplan, 2021)

Figure 1: Cryptocurrency and Corruption: Auditing with Blockchain

Blockchain and Distributed Ledger Technology are terms that are often used interchangeably. Blockchain is a type of public or private ledger that uses a peer-to-peer network to share ledgers, record transactions, and verify ownership transfers (Scheepers, 2019).

2.3 Crypto assets token classification

Crypto assets are often purchased by users for multiple reasons, such as speculative investing, as a medium of exchange of goods or services, or for access to specific products, services, and utilities (Intergovernmental Fintech Working Group, 2021).

According to Deloitte (2020), a token is an object that represents something else, such as another object either physical or virtual. It can be transferred between two parties without the need for a central intermediary (Deloitte, 2020). A token can be described as a representation of something unique (Lewis, 2015). Tokens have emerged as an object of reference to

represent assets, utility, or a claim on something inherent to a specific blockchain project (Pilkington, 2016).

Guidance on crypto assets issued by the Financial Conduct Authority of the United Kingdom (Financial Conduct Authority of the United Kingdom, 2019) categorises crypto assets into three different classes, namely:

- Exchange tokens: These tokens are not issued or backed by any central banking authority. The intention of their design is to be used as a medium of exchange. They represent a decentralised tool for which the purchasing and sale goods and services can occur without regulation (Intergovernmental Fintech Working Group, 2021)
- Security tokens: These tokens provide specific rights associated with them to their holders such as ownership, the repayment of a liability, or an entitlement to a share in future profits generated (Intergovernmental Fintech Working Group, 2021)
- Utility tokens: These tokens do not give holders rights akin to those granted by Specified Investments, but rather access to present or future goods and/or services (Financial Conduct Authority of the United Kingdom, 2019).

Ernst and Young LLP (2020) defines asset-backed tokens as a distributed ledger that may be used as a platform for storing a distributed record of any kind of data (Ernst & Young LLP, 2021). Financial assets including gold, equities, and oil can be tokenised and recorded on a distributed ledger. The aim of tokenisation is to streamline the process of trading these forms of products through the immediate settlement (Ernst & Young LLP, 2021).

A Utility token can be described as a type of token, offered by the holder in exchange for some type of resource or funding for a specified project. In order to fund such projects, a company will conduct an Initial coin offering (ICOs) in which the funds are raised; and of which will allow the company to carry out the project it undertook (Ernst & Young LLP, 2021).

Once the project is complete, investors can exchange the tokens held for the specific resources associated with the carrying out of the project. The value of the token is derived from the use of the token within the miniature economy set up by the organisation (Ernst & Young LLP, 2021). This form of offering is primarily used by companies to raise awareness of their products and to raise capital in the development of a resource. The holder of the token

can exchange their token for the asset upon the realisation of the asset (Price-Waterhouse-Cooper, 2019).

A Security Token can be defined as a digital token that utilises blockchain technology, however, possesses a similar nature to traditional securities. They may grant a financial shareholding in the firm, occasionally a right to receive money or another financial asset or occasionally the power to vote in the entity (Price-Waterhouse-Cooper, 2019).

2.4 Analysis of the commercial and economic substance of various crypto assets

The digital representation of economic value, cryptographic-driven identification, usage of distributed ledger technology, decentralisation, and little to no accompanying regulatory overreach are just a few of the characteristics that make crypto assets distinctly recognisable (European Financial Reporting Advisory Group, 2020).

Based on a study done by IASB personnel, it was determined that IFRS reporting entities do not use crypto assets to a sufficient extent (European Financial Reporting Advisory Group, 2020). Although it agreed to do so, the IASB did not actually apply any of the required accounting standard revisions. (European Financial Reporting Advisory Group, 2020). Subsequently, developments undertaken by the International Financial Reporting Interpretations Committee (IFRIC) resulted in the issuance of a decision for public comment that clarified the accounting for cryptocurrencies (European Financial Reporting Advisory Group, 2020).

The Interpretations Committee notes that crypto currency meets the definition of an intangible asset under IAS 38 (OECD, 2020). The Interpretations Committee noted that a cryptocurrency holding satisfies IAS 38's definition of an intangible asset due to::

> *a) "It is capable of being separated from the holder and sold or transferred individually; and*
>
> *b) It does not give the holder a right to receive a fixed or determinable number of units of currency" (European Financial Reporting Advisory Group, 2020; International Financial Reporting Interpretations Committee, 2019)*

IFRIC's proposals deals solely with cryptocurrencies and makes no reference to crypto assets. As it stands, there is no specific accounting guidance on other crypto assets, such as tokens, issued by the IASB (KMPG, 2019). In the absence of formal established guidelines,

accounting for crypto assets is based on the underlying rights and obligations associated with the specific asset (KMPG, 2019).

Different types of tokens will require various approaches adopted for the classification for accounting and tax purposes (OECD, 2020). Asset backed tokens derive their value from the associated underlying assets, whereas Utility tokens derive their value from the demand for the service or good provided by the issuer of the token (Price-Waterhouse-Cooper, 2019). Security tokens give the holder an economic interest in an entity via the acquisition of the token (KMPG, 2019) and their value is associated with the economic success of the entity, seeing that the holder of the token shares in future profits of the company (Price-Waterhouse-Cooper, 2019).

Table 1 illustrates an analysis of the economic characteristics of the various identifiable crypto assets, the inherent value of these assets and a summary of the accounting treatment of these identifiable assets.

Table 1: Economic characteristics of crypto assets

Crypto Asset Type	**Economic Characteristic**	**Inherent Value and Accounting Treatment**
Asset Backed Token	Asset Backed Tokens provide the holder of the asset a right to an underlying asset (Price-Waterhouse-Cooper, 2019) These tokens are intended to represent rights of a exclusive or an obligatory nature over physical assets (Garcia-Teruel & Simón-Moreno, 2021) and are simply a representation of the underlying asset. These underlying assets include commodities such as valuable resources such as gold, oil, intangible assets, artwork, or real estate (Price-Waterhouse-Cooper, 2019). The owner of the asset backed token is akin to the owner of the underlying asset who owns a piece of the asset and has the similar rights as an owner (Liang, 2018).	Holders of asset backed tokens are able to obtain economic benefits by redeeming the crypto asset for the underlying asset (Ernst & Young LLP, 2021) Asset backed tokens is a representation of ownership of a material asset and derive their value from that asset (Baur, 2022). The token does not derive its value from the actual asset, but a fractional ownership of the underlying asset (Hargrave, Sahdev & Feldmeier, 2018) The price associated with the asset token is equal the price of the individualised underlying asset (Kjærsgaard, 2019).

Crypto Asset Type	Economic Characteristic	Inherent Value and Accounting Treatment
Utility Token	These tokens grant access to existing or developing future products or services (European Financial Reporting Advisory Group, 2020). These tokens can be viewed as a form of prepayment that provides the holder a right to future goods or services associated with the token (Price-Waterhouse-Cooper, 2019). Defined as a pre-paid right to consume an issuer's goods or services (Parrondo, 2019) and entitles the holder to a future good is more akin to an electronic voucher (Ernst & Young LLP, 2021). These tokens can be seen as comparable to club memberships, loyalty cards, gift vouchers and timeshare rentals as they can be traded for network products or services. (European Financial Reporting Advisory Group, 2020).	The demand for the issuer's service or product determines the value of utility tokens (Baur, 2022). These tokens serve as a prepayment for products or services, and they may meet the criteria for intangible assets under IAS 38. (Price-Waterhouse-Cooper, 2019). When the prepayment is not an intangible asset as defined, the accounting treatment will be akin to those of prepaid assets (Price-Waterhouse-Cooper, 2019). Utility tokens are intended to increase in their value in relation to the increase in the value of the goods and services associated with the issuing company (Kjærsgaard, 2019).
Security Tokens	Security tokens refer to tokenised assets or traditional financial instruments (debt or equity) governed by securities laws and financial instruments regulatory framework (European Financial Reporting Advisory Group, 2020). They can provide an economic claim in a company a claim to cash or another type of financial asset, the ability to vote in a company decision and possesses characteristics similar to conventional shares (European Financial Reporting Advisory Group, 2020).	The value of security tokens is mainly associated with the success of the entity, as the holder of the token shares in future profits of the issuing entity (Price-Waterhouse-Cooper, 2019). Security tokens should be accounted following the regulatory framework associated with securities such as shares or bonds, depending on the underlying rights of the token (Parrondo, 2019). If a security token contains a contractual right to cash or another financial asset, it may satisfy the requirements of IFRS 9's definition of a financial asset (Price-Waterhouse-Cooper, 2019).

Utility tokens are akin to a barter transaction backed by a promissory note. A promissory note is an unconditional promise to settle a sum of payment on demand on a specified due date (IMF, 2003). They are widely used in international trade as a secure means of payment (IMF, 2003). A barter transaction can be described as the exchange of goods or services, in exchange for other goods or services (ACCA Global, 2022). Like a barter transaction backed by a promissory note, utility tokens give the holder a right to future goods or services in exchange for some type of resource. The main purpose of a utility token is to give holders a consumptive right to a product or service through the granting of access to a community based ecosystem (Catalini & Gans, 2019; Howell et al., 2020).

Asset Backed Tokens are used to transfer the ownership of underlying assets without physically trading them and will be measured using the relevant accounting standards applicable to the underlying asset (Price-Waterhouse-Coopers, 2019). The holder of the token has no rights to the actual physical asset; however, they have a right of ownership of the underlying asset (Hargrave, Sahdev & Feldmeier, 2018). An example of this would be a gold-backed token that would be accounted for as inventory, instead of a financial instrument Whereas a token that represents a portion of ownership in a renewable energy facility could be recorded as property, plant, and equipment (Dovaston, 2022).

Security Tokens, on the other hand, are more akin to conventional financial instruments than they are to cash. Security tokens are bought by an investor with the goal of appreciation in value of the asset (Lambert, Liebau & Roosenboom, 2021). The general consensus associated with of security tokens is that they are investment products (e.g., stocks and bonds) and thus usually confer cashflow rights to investors and in certain cases, voting rights (Lambert, Liebau & Roosenboom, 2021). These tokens represent or provide a right to a specific class of financial assets that are legally “securities”, such as shares, bonds, warrants or options, or otherwise provide the same rights as “securities” (Security Token Offerings – A European Perspective on Regulation, 2022).

Chapter 3: United Kingdom framework for the taxation of Crypto assets

In the absence of clear tax treatment from a South African perspective and with challenges arising from crypto asset borne transactions that lack appropriate and unified regulatory framework addressing the taxing implications and associated risks thereof (Kabwe, 2021), a need to refer to the economics of crypto assets and stances takes from other taxing jurisdictions is warranted. In regard to the call from Basson (2020), a comparative analysis is warranted to establish the economic and taxing implications of crypto assets due to extensive guidance on the normal tax treatment of crypto asset transactions having been provided, due to the fact that crypto assets remain largely unregulated from a South African perspective (The Law Library of Congress, 2019).

The authorities in the United Kingdom have established regulatory frameworks pertaining to the regulations of crypto assets (Huang, 2020) and therefore an analysis is conducted using the regulations established from a United Kingdom' perspective.

In October 2018, the United Kingdom's Crypto Assets Taskforce published a report that set out the policy and regulatory approach to crypto assets and DLT. The task force established a set number of pledges including whether unregulated activities should fall within the realm of regulation and providing clarity to relevant stakeholders about the current regulations surrounding crypto asset activities (Financial Conduct Authority, 2019).

In January 2021, Her Majesty's Treasury released a consultation paper, UK regulatory approach to crypto assets and stablecoins - consultation and call for evidence. The paper is the first stage implemented by the United Kingdom in their consultative process with industry and stakeholders on their approach on accounting for the nature and treatment of crypto assets (Treasury, 2021).

This chapter provides a detailed analysis of the United Kingdom's regulation on crypto assets. The objective of the chapter is to determine how the United Kingdom taxing regulators treat transactions involving the use of crypto–assets. The chapter primarily focuses on the consultation paper released by Her Majesty's Treasury and explores the United Kingdom tax treatment of crypto assets.

3.1 United Kingdom's definition of Crypto assets

The United Kingdom (UK) is currently recognised as a world leader in financial technology market (Treasury, 2021). The development of crypto asset regulation aims to ensure that the UK is at the forefront of crypto asset regulation and technological advancements, attracting investments, creations of jobs and widening consumer choice (Government sets out plan to make UK a global crypto asset technology hub, 2022).

Her Majesty's Treasury identifies three categories of crypto assets, namely e–money tokens, security tokens and unregulated tokens. E–money tokens are defined as a digital payment that stores value, can be redeemed at par value, at any time and offer holders a direct claim on the issuer (Treasury, 2021). Further to this, a security token can be defined as a tokenised, digital form of traditional securities (Treasury, 2021). These tokens amount to a specified investment, as set out in the Financial Services and Markets Act (2000), Regulated Activities Order (RAO) (Authority, 2016) and Financial Conduct Authority (2018).

Utility tokens and exchange tokens are included under the spectrum of unregulated tokens (Huang, 2021). Utility tokens are used to purchase a good or service or to gain access to a specific DLT platform (Treasury, 2021), while exchange tokens are used primarily for exchange (Treasury, 2021) in regard to payment transactions between two parties or trading of crypto asset on various crypto exchanges (Huang, 2021). Popular crypto currency platforms, such as Bitcoin and Ethereum, are a form of exchange token.

3.2 Regulatory framework governing crypto assets from a United Kingdom perspective

At present, a vast majority of crypto assets and unregulated exchange tokens remain highly volatile and cannot be used as a means of exchange due to the risk of its volatile nature (Treasury, 2021). Different crypto asset categories vary in the rights that they grant to their holders as well as vary in their uses (Financial Conduct Authority, 2018). The Crypto assets taskforce, consisting of Her Majesty's Treasury, the Financial Conduct Authority, and the Bank of England, has developed a framework which considers the utilisation of the three main forms of crypto assets. The categories are as follows:

i. As a means of exchange, in which the trading of these assets is conducted under a decentralised tool in which the facilitation of payment is conducted without regulation. The buying and selling of goods and services are enabled under this functioning decentralised tool (Financial Conduct Authority, 2018).
ii. For example, enterprises and consumers can access the investment market directly by owning and trading crypto assets, or indirectly by holding and trading financial instruments that are closely related to crypto assets (Financial Conduct Authority, 2018). (Financial Conduct Authority, 2018).
iii. To support the function of capital raising and the creation of numerous decentralised peer - to - peer networks through the offering of tokens via an Initial Coin Offering (Financial Conduct Authority, 2018).

The UK government is in the process of proposing a unified approach on the regulation of crypto assets under which the rules and regulations governing crypto assets are set out by independent regulators. This would involve these independent regulators using their regulatory powers to set out rules and codes of practice, within the oversight Her Majesty's Treasury and Parliament and the framework of objectives and other considerations set out by Her Majesty's Treasury (Treasury, 2021).

The consultation paper, *UK regulatory approach to crypto assets and stablecoins* - Consultation call for evidence reads:

> *"Rules and requirements under the proposed regime would take relevant aspects of the UK's current approach to e-money and payments regulation, drawing on existing rules as far as possible. The main pieces of UK legislation governing payments regulation are the Electronic Money Regulations 2011 and Payments Services Regulations 2017. These provide powers to the FCA and PSR to regulate and supervise firms engaged in relevant payment activities*."

The UK stance on regulation of crypto assets suggests that the proposed regulatory framework will utilise the existing current legislation that is available. The principal Acts and Regulations applied in the guidance paper are the Financial Services and Markets Act 2000, the Regulated Authority Order 2001, the Electronic Money Regulations 2011, the European Union Markets in Financial Instruments Directive II, as well as the Financial Conduct Authority Handbook and the Prudential Regulation Authority.

3.2.1 E–Money Tokens

E-money tokens are subject to and regulated under the Electronic Money Regulations 2011 and Article 9b of the Regulated Authority Order 2001 (Financial Conduct Authority, 2018).

Authorised e-money must be widely accepted and used in society, and it must be a represent an equivalent of value of users' funds (Electronic Money Regulations, 2011). E-money token issuers must be independent third parties in which transaction services must be provided with stabilised rates against that of fiat money and comply with regulatory requirements associated with capital raising, money laundering and record keeping (Huang, 2021).

3.2.2 Security Tokens

The Financial Conduct Authority classifies security tokens, following the definition of 'Specified Investments' under the Regulated Authority Order 2001 (Financial Conduct Authority, 2019) with their characteristics being akin to traditional instruments such as debentures, shares, or units in a collective investment scheme (Financial Conduct Authority, 2019). Crypto assets that possess similar traits to that of shares or specified investments and are negotiable and transmittable over an open market are considered as security tokens (Huang, 2011). The nature of the security token determines the regulatory parameters to which the security token is subject under the Regulated Authority Order 2001.

3.2.3 Utility Tokens and Exchange Tokens

Utility tokens provide their users with access to current or prospective services or products and are closely related to rights associated with pre-payment vouchers (Financial Conduct Authority, 2019). Utility tokens owners can remain anonymous and trade tokens on a secondary market and use their tokens for speculative investment purposes (Huang, 2011). Utility tokens do not exhibit features akin to those of security tokens and will not fall in the ambit of the current regulatory framework and regime (Financial Conduct Authority, 2019).

Utility and Exchange tokens must adhere to the Fifth Anti-Money Laundering Directive of the EU and the Money Laundering and Terrorist Financing (Amendment) Regulations 2019 even if they are beyond the Financial Conduct Authority's regulatory purview. Exchange tokens can enable its holder to purchase and dispose goods and services without the need of a traditional intermediary such as a central or commercial bank (Financial Conduct Authority, 2019) and can be used for payment transactions or trading on crypto asset exchanges (Huang, 2011).

As it stands, there are regulatory numerous rules applying to unregulated crypto assets. These rules include the Senior Managers and Certification Regime 2019 for individual conduct, the Principles for Business 2020 for commercial conduct, as well as the Banking: Conduct of Business sourcebook (BCOBS) 2020 for banks and financial firms' wallets (Huang, 2011). However, the Financial Conduct Authority does not have any form of regulatory framework in place for the regulation of Exchange Tokens.

3.3 Taxing implications for Individual Taxpayers

Her Majesty's Revenue and Customs (HMRC) establishes that taxing implications involving crypto assets either will attract taxing implications from an Income Tax perspective or may attract Capital Gains Tax implications with Exchange tokens, Utility tokens, Security tokens and Stablecoins from a United Kingdom perspective (CRYPTO10100 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

The Income Tax (Earnings and Pensions) Act of 2003 and the Income Tax (Trading and Other Income) Act of 2005 govern the implication of income tax for individual taxpayers, according to the Income Tax Act of 2007. Any crypto asset that an individual employee receives from their company in the form of a non-cash remuneration, mining, transaction confirmation, or through airdrops is subject to income tax and national insurance contributions (CRYPTO20050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). The Income Tax (Earnings and Pensions) Act 2003 determines what constitutes employment income and earnings that are subject to income tax implications.

Section 7 (2) of the Income Tax (Earnings and Pensions) Act 2003 defines employment income as:

(*2) "Employment income means—*

a) earnings within Chapter 1 of Part 3,
b) any amount treated as earnings (see subsection (5)), or
c) any amount which counts as employment income (see subsection (6))"

Section 62(2) and Section 62(3) of the Income Tax (Earnings and Pensions) Act 2003 reads:

(2) "In those Parts 'earnings', in relation to an employment, means—

a) any salary, wages, or fee,

b) *any gratuity or other profit or incidental benefit of any kind obtained by the employee if it is money or money's worth, or*
c) *anything else that constitutes an emolument of the employment."*

For crypto assets to qualify as employment income, they need be easily convertible. Crypto assets would need to be in the form as a readily convertible asset to qualify as employment income (Schiavone, n.d.). Crypto assets are Readily Convertible Assets if a trading arrangement exists, or in accordance with section 702 of the Income Tax (Earnings and Pensions) Act 2003 are anticipated to exist. (CRYPTO21100 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

The employer is expected to account to HMRC for the tax and National Insurance contributions on crypto assets provided as part of their employment based on the best estimate of the value of such asset (CRYPTO21100 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). The best estimate value of the crypto assets will be included in the earnings of the individual taxpayer and will be taxed appropriately, based on the applicable rate established in the Income Tax Act 2007. The taxpayer is taxed at a rate dependent on the income tax band under which they fall.

Transactions involving mining and staking should be accounted for as taxable income and must be subjected to Income Tax (Schiavone, n.d.). Tokens given to crypto asset "miners" serve as the compensation received for mining activities, and as such, will be subject to income tax and national insurance contributions (Schiavone, n.d.) The value derived in pounds at the moment of receiving the tokens granted will be subject to income tax if the mining activity is not considered a trade as defined (CRYPTO21150 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

The activity of transferring, disposing, and selling of crypto assets is considered as a trade by a question of the facts surrounding the specified situation and is not predetermined by the application of any legal tests (Schiavone, n.d.). Only in extremely exceptional circumstances would HMRC expect individuals to purchase and sell exchange tokens with the level of organisation and frequency for which it would be classified as financial trading (CRYPTO20250 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). If the taxpayer's activity is classified as trading as per the analysis of the surrounding facts, then

Income Tax implications will take priority over Capital Gains Tax implications CRYPTO20250 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

HMRC approach is that an individual purchasing and disposing crypto assets can fall within the scope of the application of Capital Gain Tax (Schiavone, n.d.). This is only applicable to the extent that there is evidence that trading of crypto assets has taken place with reference to the facts surrounding the trading activity and by referring to the “badges of trade” approach (Schiavone, n.d.).

In order to establish whether purchasing or selling assets constitutes a trade, badges of trade have been used (Schiavone, n.d.). A series of indicators known as "badges of trade" is used to determine if a taxpayer has engaged in trading activities (Ooi, 2021). HMRC is responsible for nine trade credentials. These indicators of trade include the intent to make a profit, the volume of transactions, the type of asset, the existence of comparable trading activities or interests, changes to the asset, the manner in which the sale was conducted, the source of financing, the time between the purchase and sale, and the method of acquisition (CRYPTO20250 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

In crypto assets trading, some parameters appear to have a greater influence in determining whether the crypto trading amounts to a taxpayer engaged in a specified trade (Schiavone, n.d.). These factors include the experience and the technical background of the individual trader, the frequency of the trading transactions, the sole involvement in trading crypto activities such as mining and staking, the participation in the cryptocurrency market as well as to attending courses and events that expand the understanding of crypto assets (Schiavone, n.d.). Trading of exchange tokens is similar to that of trading of conventional instruments such as shares, securities and other financial products (CRYPTO20250 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

HMRC has adopted the stance that in majority of cases, that individuals hold crypto assets as personal investment with the intention of capital appreciation or to make particular purchases (CRYPTO20050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). The purchasing and selling of tokens by an individual will normally be categorised as an investment activity. In these cases, if an individual invests in crypto asset tokens, they will attract Capital Gains implications on any gains realised on the sale of these tokens (CRYPTO22050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

Tokens are digital and intangible, however, they are classified as ‘chargeable assets’ for Capital Gains Tax purposes if they have a have that can be established and that they possess the ability to be owned (CRYPTO22050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

Her Majesty’s Revenue and Customs defines a disposal as a broad concept and includes the following:

i. *“selling tokens for money*
ii. *exchanging tokens for a different type of token*
iii. *using tokens to pay for goods or services*
iv. *giving away tokens to another person (unless it is a gift to their spouse or civil partner)”*

A disposal is considered to have occurred when the beneficial ownership of the asset has changed when a new different token has been acquired (Schiavone, n.d.). In a broad sense, a capital gain can be defined as an amount by which the disposal value of the asset exceeds its acquisition value (CG10240 - Capital Gains Manual - HMRC internal manual - GOV.UK, 2021). Profits on the disposal of an asset held by a Taxpayer are subject to Capital Gains taxes. The Capital Gain takes into account the purchase price of the asset, additional expenses incurred for the asset less the value received upon disposal of the asset (CG10240 - Capital Gains Manual - HMRC internal manual - GOV.UK, 2021).

Consideration can be any form of value received (CG14500 - Capital Gains Manual - HMRC internal manual - GOV.UK, 2021). Along with actual money, it can also take the shape of monetary value. It contains the capitalised value of the income-generating rights (CG14500 - Capital Gains Manual - HMRC internal manual - GOV.UK, 2021). The consideration is assessed to be too equal to the asset's market worth as of the disposal date (Schiavone, n.d.). The price that an asset might reasonably be expected to sell for on the open market is considered to be the assets market value (Schiavone, n.d.).

Allowable expenses are allowed as a deduction against the consideration received upon the disposal of crypto assets. The type of expenses that can be deductible are outlined in Section 38 of the Taxation of Chargeable Gains Act of 1992. (CRYPTO22150 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

Many crypto assets are traded on crypto exchanges where the pound sterling is not the default trading currency. The value of the profit or loss generated from the exchange of digital assets must be converted into Pounds Sterling (CRYPTO23000 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). HMRC have the view that:

> *"If the transaction does not have a pound sterling value (for example if bitcoin is exchanged for Ether) an appropriate exchange rate must be established in order to convert the transaction to pound sterling."*

For Capital Gains Tax purposes, any gains denominated in a foreign currency would need to be converted into pounds based on the spot rate at the date of the transaction or receipt (Schiavone, n.d.) The rate of Capital Gains tax charged upon the disposal of an asset is 10% if the taxpayer falls within the basic income tax band. The rate of Capital Gains increases to 20% if the taxpayer falls into a tax band that is greater than the basic income tax band.

3.4 Taxing implications for Corporate Taxpayers

Corporation Tax is a form of tax that is imposed by HMRC on the revenue generated from the operations of companies situated in the United Kingdom (CRYPTO41050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).Companies are required to account for all exchange token transactions when determining their corporate tax, just as they would with any other type of income generating asset (CRYPTO41050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

Determining whether transactions involving crypto asset exchange tokens would count as a trade is crucial, just as with other kinds of business (Britton, 2021). If this is the case, the gains from crypto asset transactions would be accounted for as revenue in respect of that specific trade (Britton, 2021). Since HMRC does not view exchange tokens as a form of currency, aspects of the corporation tax law including the foreign exchange regulations and the Disregard Regulations do not apply to these exchange tokens (Britton, 2021).

The action involving the exchange token will be categorised as a disposal of capital assets event and any gain resulting from the disposal will be charged to Corporation Tax as a

chargeable gain if it is not defined as a trading activity or is not reported under Corporation Tax in any way (CRYPTO41050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). If a company hold crypto assets and accounts for them as intangible assets, then Corporation Tax intangibles fixed assets rules may be applicable and they will take precedent over any other Corporate Tax and Capital Gains Tax rules (Schiavone, n.d.).

The term "intangible asset" refers to

> *"a variety of assets with a commercial value attached, such as agricultural quota, payment entitlements under the single payment scheme for farmers, franchises, and telecommunication rights, in addition to intellectual property such as patents, copyrights, and trademarks."* (CIRD10101 - Corporate Intangibles Research and Development Manual - HMRC internal manual - GOV.UK, 2021).

If exchange tokens are classed as "intangible assets" for accounting purposes, companies that account for them in this nature may be subject to taxation under the Corporation Tax laws (CRYPTO41150 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). If the rules for intangible fixed assets apply to the crypto asset exchange tokens, they will be taxed exactly the same as any other intangible asset, and this treatment will take precedence over the rules for chargeable gains (Britton, 2021).

Companies that invest in exchange tokens are required to pay Corporation Tax on any profits made from the sale of these assets. The partners in a partnership or limited liability partnership that own exchange tokens as an investment are responsible for paying capital gains tax or corporation tax on any profits they make from selling the assets (CRYPTO41200 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). In these circumstances, the gains, and losses on the disposal of the asset are calculated (Britton, 2021).

To establish whether they must pay Corporation Tax, entities must assess any gains or losses on the sale of their crypto tokens (CRYPTO41250 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). If a company transfers exchange tokens to another company that is not a member of the same group of businesses, it is required to determine the market value of the transferred exchange tokens and use that information to determine the chargeable gain (CRYPTO41250 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021)

Certain expenses can be deducted when calculating the gain or loss on disposal, including the cost for which the asset was initially purchased, and valuation costs incurred to calculate the gain or loss on disposal (Britton, 2021). Section 38 of the Taxation of Chargeable Gains Act 1992 provides for the types of costs which can be deducted. Section 38 of the Taxation of Chargeable Gains Act 1992 include the below as costs that can be deducted:

i. *"the original purchase price of the asset (in pounds sterling)*
ii. *transaction fees paid for having the transaction included on the distributed ledger*
iii. *advertising for a purchaser or a vendor*
iv. *professional costs to draw up a contract for the acquisition or disposal of the tokens*
v. *costs of making a valuation or apportionment to be able to calculate gains or losses"*

When determining the gain or loss on selling crypto assets, the aforementioned expenses can be subtracted. Because mining costs are not entirely used to purchase the tokens, they do not qualify as allowed costs and do not meet the requirements of section 38(1)(a) of the Taxation of Chargeable Gains Act of 1992. (CRYPTO41300 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). However, it is possible to claim these costs as deductions as profits generated from the company's trade for Income Taxation or Corporate Taxation purposes.

3.5 Analysis of taxing implications of Crypto Assets from a United Kingdom Perspective

HMRC recognises taxing implication consequences from the holding of Utility, Exchange, Security and Stablecoin Tokens. From the perspective of an individual taxpayer, holding crypto assets will attract taxation from an Income Tax perspective or from a Capital Gains Tax perspective.

Individuals who receive crypto assets as a form of their salary package will be liable to pay Income Tax and National Insurance contributions on the value of crypto assets received (CRYPTO20050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). However, in order to qualify as employment income, the crypto asset must be provided in the form of a readily convertible asset (Schiavone, n.d.).

Mining and staking transactions qualify as taxable income and are subject to Income Tax. Tokens that awarded to “miners” of crypto assets represent the consideration received for mining activity and therefore will be subject to Income Tax and national insurance contribution (Schiavone, n.d.). If the taxpayer is involved in a trade of crypto assets, the profits from the trade will be taxed by HMRC under the Income Tax regulatory framework. The individual taxpayer will be taxed in their personal capacity on any profits or losses that are incurred in the carrying on of a trade and in which Income Tax rules would take priority over the Capital Gains Tax rules.

The buying and selling of shares by individual taxpayers are viewed as a Capital Gains Tax event from the perspective of HMRC. Individual taxpayers who purchase and sell crypto assets for investment purposes will be taxed on the gain realised from the sale of such crypto asset. On the day of sale, the consideration is taken to be equal to the asset's market value.

If the sole purpose of a company situated in the United Kingdom (UK) is to trade crypto asset tokens, then any profits realised from the sale will be subject to Corporation Taxation as the transaction is classified as revenue in nature. If the activity concerning crypto asset tokens is not of a trading in nature, then the activity will be accounted for as a disposal of capital assets and any gain from the disposal would normally be assessed as a chargeable gain to Corporation Tax. Companies that hold crypto asset tokens for investment purposes will be liable for Corporation taxation on the gain realised from the disposal of the asset.

The UK has adopted an approach of utilising the current legislation that is available and look to build on the current legislation. Security Tokens and E–Money Tokens fall under the legislative ambit of the Financial Conduct Authority and are categorised as regulated tokens. Utility and Exchange Tokens fall outside of the ambit of the Financial Conduct Authority and are considered unregulated tokens. The status of unregulated tokens signifies the fact that these tokens fall outside the regulatory parameters and do not offer users the same protection as that of regulated tokens.

Chapter 4: European Union framework for the taxation of Crypto assets

Since the European Commission's FinTech Action Plan, COM/2018/109 final, was published in March 2018, the organization has been investigating the opportunities and difficulties presented by digital assets (European Commission, 2020). The European Union Commission instructed the European Banking Authority and European Security and Markets Authority to determine whether the current European Union (EU) financial services regulatory framework is appropriate and applicable to crypto assets in the 2018 FinTech Action Plan (European Commission, 2020).

Although some crypto assets would fall under the purview of EU law, applying the provisions under the current EU legislation is not a simple exercise, according to Advice on Initial Coin Offerings and Crypto-Assets, published in January 2019. The recommendation underlined that some clauses in the current EU regulation may discourage the deployment of DLT (European Commission, 2020). As there is currently a lack of clarity regarding the applicability of the current regulatory framework applied to these complex instruments, crypto assets present issues for regulators and stakeholders (European Securities and Markets Authority, 2019).

Concerns over money laundering, market integrity, consumer protection, and potential effects on broader financial stability are still being raised by crypto assets (European Central Bank, 2019). Due to their high volatility nature and lack of underlying fundamental value, crypto assets are considered to be highly speculative and come with a high risk profile that might result in significant losses for stakeholders (European Securities and Markets Authority, 2019). The threats they pose to investor safety and market integrity worry the European Security and Markets Authority (European Securities and Markets Authority, 2019).

A proposal for a regulation of the European Parliament and of the Council on Markets in Crypto Assets and Amending Directive (EU) 2019/1937 was made public by the European Commission on 24 September 2021. The proposal's objectives are to develop a balanced framework to foster technological innovation and fair competition as well as to clearly specify the legal treatment of all crypto assets that are not already covered by existing law (European Commission, 2020). In addition to the foregoing, the plan incorporates safeguards to handle all potential risks to financial stability and monetary policy and strives to

implement appropriate levels of investor and consumer protection, and (European Commission, 2020).

4.1 European Union's definition of Crypto asset

Crypto asset can be defined as

> *"any asset recorded in digital form that is not and does not represent either a financial claim on, or a financial liability of, any natural or legal person, and which does not embody a proprietary right against an entity" (Bullmann, 2019).*

Certain crypto assets, referred to as investment type assets, may possess the same profit rights to that of equity like instruments or non – equity like instruments. Other types of crypto assets, so called utility type assets, provide a consumption of rights (European Securities and Markets Authority, 2019). Further to this there are payment types of crypto assets. This form of crypto asset has no tangible value and may serve as a means of exchange or payment for goods and services (European Securities and Markets Authority, 2019).

4.2 Regulatory Framework governing Crypto assets from a European Perspective

On 24 September 2021, the European Commission adopted the digital finance package. This package constitutes a breakthrough in the regulation of financial technology. The package includes, among others, a proposal for a regulation on 'markets in crypto assets' (MiCA), which looks to establish rules for the regulation of block chain fintech across the European Union (Broumas, 2021). The proposal is a component of a set of policies designed to assist the development of digital finance in terms of innovation and competition while minimising the dangers (European Commission, 2020).

MiCA provides disclosure requirements for the creation of crypto assets and their inclusion in trading that is currently unregulated (Nägele, 2022). Additionally, MiCA controls requirements for companies that provide crypto asset services, including governance frameworks, prudential standards, and guidelines for the security of client funds (Nägele, 2022).

The majority of crypto assets are not subject to EU regulation, which poses problems for market integrity, investor protection, and financial stability (European Commission, 2020).

However, various crypto assets are recognized as financial instruments under the definition of the Directive 2014/65/EU of the European Parliament and of the Council. Crypto assets are currently defined as financial instruments or electronic money (e-money) under the Markets in Financial Instruments Directive (MiFID) and the Electronic Money Directive (EMD) and currently fall outside of the scope for MiCA (Vermaak, 2021).

With MiCA, the European Union Commission has proposed certain regulatory provisions for utility and stablecoins. This includes payment tokens, asset backed tokens ad stablecoins (Zetzsche, 2020). Due to crypto assets being designed in variety of ways and entailing ownership of a variety of rights ranging from financial interests in a company and non – financial interests, academic experts have established three categories of crypto assets (Zetzsche, 2020; Barsan, 2017). The three categories of crypto assets include asset backed tokens, utility tokens and security tokens.

These regulations apply to individuals who are involved in the issuance of crypto assets or individuals who provide services related to crypto assets in the European Union space (Commission, 2020). MiCA aims to create a fully harmonised European crypto asset market and looks to establish legal clarity throughout the EU via establishing clear asset classification and guidelines for service providers and issuers alike (Stanford Law School, 2021).

4.2.1 Issuers of Crypto Assets

The MiCA regulatory proposal introduces two new subject categories, specifically the issuers of crypto assets and the suppliers of crypto asset services (Boánek, 2021). Issuers of crypto assets are legal persons or companies that offer crypto asset related services to the public or are involved in having crypto assets admitted to trading platforms (Bočánek, 2021). MiCA regulations state that no issuer of crypto assets, can offer such crypto assets to the public, or seek an admission of such crypto assets to trading on a trading platform for crypto assets, unless that issuer:

i. *"is a legal entity.*
ii. *in compliance with Article 5, has created a crypto asset white paper for certain crypto assets.*
iii. *has notified that crypto asset white paper in accordance with Article 7;*
iv. *has issued the crypto asset white paper in accordance with Article 8;*
v. *complies with the requirements laid down in Article 13."*

The unique criteria of MiCA concern own fund requirements, reserve management, and investor rights. (Zetzsche, 2020). These core principles include:

i. Asset Referenced Tokens issuers are required to raise EUR 350,000 plus 2% of their average reserve assets over the previous six months in as outlined in Articles 26–30 of the MiCA. Regulations (Zetzsche, 2020).
ii. The holders of tokens are required to have a specified amount of asset reserves. If an issuer issues multiple token types, they must set up a reserve for each type of token, independent from the other reserves (Zetzsche, 2020). The reserve must be carefully managed, matching any token's production and destruction with an equivalent rise or decrease in the reserve's holdings (Zetzsche, 2020). Another requirement is that reserves should be placed in highly liquid financial products that can be quickly sold with no negative price impact (Zetzsche, 2020).
iii. Asset Referenced Tokens and Electronic Money Tokens Holders' Rights: Asset Referenced Tokens (ART) issuers must in detail determine:

i. "conditions, including thresholds, periods, and timeframes, for holders of asset-referenced tokens to exercise those rights
ii. means for redemption in both regular and unusual situations.
iii. policy on valuation.
iv. terms of settlement; and
v. fees applied by ART issuers for exercising those rights"

Holders of Electronic Money Tokens have a statutory right against the Electronic Money Token issuer under Article 44 of the MiCA. Only Electronic Money Tokens at par value and upon receipt of cash, as specified in Article 4(25) are permitted from issuers. The respective issuer must redeem the monetary value of the electronic money tokens kept in cash or credit transfer at any time and at par upon request by the holder. 2020 (Zetzsche).

4.2.2 Crypto Assets Service Providers

Article 3(1) No. 9 of MiCA defines crypto-asset service exclusively as comprising:

i. *"custody and administration on behalf of third parties;*
ii. *operation of a trading platform;*
iii. *the exchange of crypto assets for fiat money that is considered legal tender or for other crypto assets;*
iv. *the execution of orders for crypto assets on behalf of third parties*
v. *placing of crypto assets;*
vi. *reception and transmission of orders on behalf of third parties; and*
vii. *providing advice on crypto assets"*

In exception of existing credit institutions and MiFID II (European Union Markets in Financial Instruments Directive), investment firms and companies involved in crypto asset based services will need national supervisory authority approval to provide crypto asset services under MiCA (Stanford Law School, 2021). These regulatory requirements include initial capital reserves, corporate governance structure and the development of Information Technology infrastructure (Stanford Law School, 2021).

Companies will need to obtain authorisation from the governments of their respective member states, which will be valid throughout the EU, in order to provide crypto asset services (Vermaak, 2021). This criterion does not apply to credit institutions or businesses whose services have already been approved by MiFiD as financial services (Vermaak, 2021).

Similar to MIFID requirements, Crypto Assets Service Providers will be subjected to requirements relating to their specific capital requirements, governance model, staff training and insurance coverage (Vermaak, 2021). Protection offered to investors remains a focal point with adequate asset separation, safekeeping of funds, business structure and management qualification needing to be established and well maintained (Vermaak, 2021).

4.3 Taxing Implications of crypto assets from a European Union perspective

Tax collection generally comes under the purview of individual EU Member States. (Congress, 2019). However, the EU has some limited powers to harmonise all Member States' rules if harmonisation is necessary to ensure that the functionality of internal markets

remains stabilised and to ensure that market avoids distortion (Congress, 2019). The EU has not released unified guidance on the taxing implication of crypto assets for member states. Therefore, the EU does not have a set framework governing the taxation of crypto assets for EU Member states. A detailed review of every member state is beyond the scope of this study. Two key taxing jurisdictions, Germany and France, have been identified in which a detailed analysis is conducted for the taxing treatment of crypto assets.

Based on the presented data, Germany and France are the two largest economic powers in the European Unions and both countries have introduced individual regulatory frameworks that govern the regulation in each country. France published the "PACTE", one of the first and foremost regulations in Europe to provide comprehensive framework to crypto assets service providers (May 2022) whereas Germany is experiencing a crypto asset revolution (Dąbrowska, 2022). France is the first European jurisdiction to introduce particular regulatory framework for cryptocurrencies at a national level (Allen, 2022). The French government has been cited as encouraging its current regulatory framework as the best available practice for other European jurisdictions (Allen, 2022).

It is estimated that over 2.1 million people, 2.62% of Germany's total population, currently own cryptocurrency in which there is a growing interest of Germans in purchasing this type of asset (Dąbrowska, 2022). On 1 October 2021, the German Crypto Asset Transfer Regulation (Kryptowertetransferverordnung –" CATR ") issued by the German Federal Ministry of Finance came into force (Pelz, 2022) due to the fact that regulation of crypto assets is becoming the focus of both the German and European legislators. Both countries contribute a quarter of the European Union's Gross Domestic Product, at 24.7% generated by Germany, followed by France (17.4%) and Italy (12.8%), ahead of Spain (8.9%) and the Netherlands (5.8%) (Which EU countries had the highest GDP in 2019? 2021).

4.3.1 Taxing Implications of Crypto Assets from a French Perspective

On 11 July 2014, the tax administration published its position on how it intended to tax transactions in Bitcoins. According to this position, those trading Bitcoins on a regular basis, were subject to tax on commercial and industrial profits (Barsan, 2019). For occasional trading in Bitcoins the tax administration still held that there was a speculative intent behind such a transaction and subjected these transactions to income tax. Therefore, depending on one's income tax rate (which is progressive in France), some individuals had to pay more than 60% tax on their transactions (Barsan, 2019).

But by the end of 2018, the French legislator had adopted an *ad hoc* regime for the taxation of cryptocurrencies. This new regime only benefits physical persons who occasionally deal with cryptocurrencies. They are submitted to a flat tax of 30% on their capital gains when they buy or sell cryptocurrencies (Barsan, 2019).

The French "loi Pacte", enacted in May 2019, established a whole new regulatory framework for digital assets in France, stressing the government's and regulators' support for innovation and the development of a legal framework and legislative process for tokens (France Leads The Way With A Dedicated Legal Regime For Digital Assets And Icos, 2021).

Article L54-10-1 of the Monetary and Financial Code is the primary piece of legislation that provides a comprehensive definition of digital assets. Article L54-10-1 defines digital assets as:

> "*Any digital representation of a security which is not issued or guaranteed by a central bank or by a public authority, which is not necessarily attached to a currency having legal tender and which does not have the legal status of a currency, but which is accepted by natural or legal persons as a medium of exchange and which can be transferred, stored or exchanged electronically."*

The *loi Pacte* is the primary piece of framework that deals with utility tokens. Utility tokens are defined by the loi Pacte as intangible digital assets that can be created, registered, stored, or transferred using distributed ledger technology (France leads the way with a dedicated legal regime for digital assets and ICOs, 2021).

As of 1 January 2019, Article 150 VH bis of the General Tax Code applies specifically to capital gains on digital assets realised by individuals. Article 150 VH bis of the General Tax Code states:

> *"I. - Subject to the provisions specific to professional profits, capital gains realized by natural persons domiciled for tax purposes in France within the meaning of Article 4 B, directly or through an intermediary, during a sale for valuable consideration of digital assets mentioned in Article L. 54-10-1 of the Monetary and Financial Code or related rights are subject to income tax under the conditions provided for in this article."*

According to O'Rorke and Lourimi 2021, the regime only applies to capital gains tax and is realized as a portion of a person's private assets profits. Any gains made when purchasing and selling digital assets professionally are subject to a progressive income tax rate that applies to profits (O'Rorke & Lourimi, 2021). The annual capital gain tax rate from the sale of digital assets is taxed at a rate of 30 percent under Article 150 VH bis of the General Tax Code, which is in accordance with the tax rate for securities (O'Rorke & Lourimi, 2021). Article 150 VH bis III states:

> *"III. - The gross capital gain or loss realized on the sale of goods or rights mentioned in I is equal to the difference between, on the one hand, the sale price and, on the other hand, the product of the total price of acquisition of the entire portfolio of digital assets by the quotient of the sale price over the overall value of this portfolio*"

The overall annual capital gain is equal to the sum of all capital gains deducted by all capital losses realised on the disposals of digital assets by individual taxpayer (O'Rorke & Lourimi, 2021). A transfer of digital assets is taxable when its counterpart is not a digital asset taxpayer (O'Rorke & Lourimi, 2021). A taxable event is triggered when an exchange of digital assets for legal tender like dollars or euros, or the purchase of a good or service in digital assets is conducted (O'Rorke & Lourimi, 2021).

Article 150 VH bis III C of the General Tax Code follows a particular logic in the calculation of the capital gain. Article 150 VH bis III C states:

> *"C. - The overall value of the digital asset portfolio is equal to the sum of the values, assessed at the time of the taxable transfer, of the various digital assets and related rights held by the transferor before proceeding with the transfer."*

The capital gain equates to a fraction of the overall capital gain realised on the entire portfolio (O'Rorke & Lourimi, 2021) with the realised capital gain equating to the difference between the sales price of the digital asset and the total acquisition price of the entire portfolio digital assets (Assaid, 2021).

The tax applies to capital gains realised by natural persons who are domiciled in France for taxation purposes, who are involved in the sale of digital assets. It is taxable at a rate of 30%, or 12.8% income tax, and 17.2% social security contributions respectively (Assaid, 2021). The 30% tax rate will only apply to the occasional sale of digital assets with professional

traders being subject to the general income tax regime (The Law Reviews - The Virtual Currency Regulation Review, 2021).

The French Accounting Standards Authority (Autorite des nomes compatibles) provide clarification on the accounting treatment of crypto asset tokens held by companies. Any gains realised on the sale of digital assets are only accounted for when tokens are disposed of with any unrealised not being subject to taxation (O'Rorke & Lourimi, 2021). However, the main difference between the corporate and individual regime is that exchanges between digital assets constitute a taxable event for corporate tax purposes.

In accordance with the Regulation, if tokens are held for purely investment purposes, they will be recorded as a short-term financial instrument with their market value being assessed each year (The Law Reviews - The Virtual Currency Regulation Review, 2021). Any unrealised profits or losses are neutralised from a tax perspective (The Law Reviews - The Virtual Currency Regulation Review, 2021).

4.3.2 Taxing Implications of Crypto Assets from a German Perceptive

In 2013, the Ministry of Finance of the Federal Republic of Germany issued a resolution recognising Bitcoin as the official settlement tool. In Germany, a special permit is required to trade and interact with crypto assets for commercial purposes. The Federal Financial Supervision Authority regulates companies involved in the trade of Bitcoins.

Furthermore, the incoming coalition government of Germany consisting of centre-left Social Democrats (SPD), the Green Party, and the business-friendly Free Democrats (FDP) have presented a agreement in which cryptocurrencies and blockchain are mentioned as pillars that will support Germany's development in the next four years (Asmakov, 2021). The coalition has promised to establish a digital state and pioneer fresh approaches to blockchain and cryptocurrency. (Asmakov, 2021).

Important adjustments to the German Banking Act are among the regulatory statutes and rules that will change as a result of the German AMLD5 implementation (Kreditwesengesetz – KWG) in relation to crypto assets (Herkstroter, 2022). These reforms have introduced a new category of crypto assets included in the definition of "financial instruments" set out in the KWG (Herkstroter, 2022). The new definition includes various types of crypto tokens including payment tokens and security tokens. However, the stance on utility tokens remains unclear with discussions taking place in legal literature (Herkstroter, 2022).

A statement was made public by the Bundesministerium der Finanzen, the Federal Ministry of Finance for Germany, which clarifies that cryptocurrencies, such as bitcoin, will not be taxed when used in payments (Germany issues guidance on cryptocurrency taxation, 2021). The document states that Germany will adopt a stance in which cryptocurrencies will be treated as legal tender when utilised for purchases for taxation purchases (Germany issues guidance on cryptocurrency taxation, 2021) The German Federal Central Tax Office or Bundeszentralamt für Steuern issued guidance in which treatment of bitcoin cryptocurrency is used as private money for tax purposes.

German tax authorities classify crypto as an economic asset that is then subject to the income tax according to Section 22 and Section 23 of the German Income Tax Act (Einkommenssteuergesetz) (Boehm, n.d.). Section 23 of the German Income Tax Act details the tax treatment of speculative transactions made with private money due to the fact that crypto is identified as ordinary intangible assets. Profits from sale of cryptocurrencies are not classified as capital assets and instead are considered as private sale transactions (Cryptocurrencies in Your German Tax Return, 2021) and cannot be compared to other financial investments such as shares or funds (Cryptocurrencies in Your German Tax Return, 2021). If cryptocurrency is held by an individual taxpayer for more than one year and then is sold, the profits realised remain tax free and does not have to be declared in your tax return (Cryptocurrencies in Your German Tax Return, 2021).

If income is realised from the private sale of crypto assets, any capital gains up to EUR 600 in the assessment period are categorised as tax free (section 23 (3) sentence 5 German Income Tax Act). If the period between acquisition and the disposal is more than one year, the full amount of the gain is classified as tax free (German income tax law and 'non-fungible tokens', 2021).

The Hamburg Tax Authority (decree of 11 December 2017 - S 2256-2017/003-52) and the Regional Tax Office of North Rhine Westphalia (20 April 2018, no. 04/2018) present principles in regard to the sale of Bitcoins. The Hamburg Tax Authority provided guidance in regard to the taxation of sales of crypto assets. Capital gains realised from the sale of crypto assets by natural persons or partnerships can either be subject to taxation as:

i. *"Income from trade or business (section 12 (1), (2) German Income Tax Act with the corresponding consequences under trade tax law – if the coins/tokens were held as business assets; or*

ii. *Income from private sales transactions in terms of section 22 (2) German Income Tax Act in conjunction with section 23 (1) sentence 1 no. 2 German Income Tax Act. Current income in private assets could also be taxable as other income under section 22 no. 3 German Income Tax Act."* (German income tax law and 'non-fungible tokens', 2021).

The income tax liability is based on the rate of tax that the individual is liable for. Further taxes applicable to individual taxpayer is a solidarity charge and church tax. Income associated with commercial activities are subject to an additional 13% to 18% trade tax (German income tax law and 'non-fungible tokens', 2021). Trade exemption amounts equating to EUR 24,500 and an income tax credit are available to Taxpayers as a form of relief for profits generated from crypto asset disposals (German income tax law and 'non-fungible tokens', 2021). The capital gains subject to taxation arise from the difference between the sales price and the acquisition cost associated with the purchase of crypto assets (Bitcoin Taxation in Germany - Cryptocurrency attorneys advise, 2021).

The profits from the sale of crypto are based on the difference between the acquisition costs and the sale prices. Section 23 para. 1 no. 2 sentence 3 of the German Income Tax Act states that a First In First Out (FIFO) method should be utilised when determining the acquisition cost of the crypto asset. The FIFO method assumes that the oldest products in the possession of the taxpayer have been sold first. The acquisition cost paid for those oldest crypto assets held are the ones used in the calculation. In this regard, the acquisition cost of the crypto being sold is based on the longest held crypto assets.

Cryptocurrency profits generated through a company are treated as income from business operations, according to Section 15 EStG (German Income Tax Law) (Cryptocurrencies in Your German Tax Return, 2022). There is no minimum timeframe associated with the holding of crypto assets and in addition to trade taxes, profits are also subjected to income tax implications or corporate income tax implications depending on the legal form of the company (Cryptocurrencies in Your German Tax Return, 2022). Transactions involving crypto currency, that form of part of a business's asset holding, leads to the taxation of earnings according to Section 15 of the German Income Tax Act. Profits are either liable to income tax (for partnerships) or corporate tax (for limited liability companies), depending on the legal structure of the business (Hornung, 2022).

4.4 Summary

Table 2 illustrates a comparative analysis of the tax approaches adopted by the German, French and United Kingdom taxing authorities:

Table 2: Comparative analysis of tax approaches

	Individual – Held for Trading Purposes	**Individual – Held for Capital Appreciation**	**Individual – Employment Purposes**	**Corporate Taxation**
France	Individuals involved in the sale of crypto assets that are shown to be regular in frequency or automation are treated as professional traders. When the purchasing and selling of digital assets is carried out on a professional basis, the gains associated with the trade are subject to the progressive income tax rate (O'Rorke & Lourimi, 2021). Professional traders and are subject to general income tax regime and may be liable to pay tax up to a rate of 45% as per the BIC.	Occasional traders pay a type of tax called Single Fixed Levy. The capital gains realised on the sale of crypto assets are equal to the difference between the sales price and the total price of acquisition associated with the crypto asset (Assaid, 2021). A fixed rate of 30 percent is applied to the annual total capital gain from the sale of digital assets.	There is currently no specific legislation available to account for the taxation of crypto assets received as remuneration from an employer.	Any gains or losses from crypto assets are subject to taxation under the regular corporation tax structure. (Cryptocurrencies and Taxes in France: All There is to Know - ESILV Graduate School of Engineering, Paris, 2022) Digital asset profits are only recorded at the time of sale, and any unrealized gains are not subject to taxation at year's end (O'Rorke & Lourimi, 2021). Proceeds on the disposal would be liable to French corporate tax, which is equivalent to the rate of 33.33% plus surtaxes of 3.3%. (Global Legal Insights – Blockchain & Cryptocurrency Regulation 2019)

	Individual – Held for Trading Purposes	**Individual – Held for Capital Appreciation**	**Individual – Employment Purposes**	**Corporate Taxation**
United Kingdom	Mining and staking transactions are taxable as income and profits from the trade of crypto assets attracting Income tax implications Tokens awarded to "miners" represent the consideration received for an activity and therefore subject to Income Tax (Schiavone, n.d.) The Taxpayer will be taxed in their personal capacity on any profits or loss that are incurred in the carrying on of a trade and in which Capital Gains Tax regulations would take precedence over Income Tax regulations.	Crypto assets, held for personal investment, are also subject to Capital Gain Tax (CRYPTO20050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). The capital gain is equal to the difference between a chargeable asset's acquisition price and its disposal price. The rate of Capital Gains tax charged upon the disposal of an asset is 10% if the taxpayer falls within the basic income tax band. The rate of Capital Gains increases to 20% if the taxpayer falls into a tax band that is greater than the basic income tax band.	The taxpayer is liable to pay Income Tax on crypto assets which they receive as part of their remuneration package from their employer (CRYPTO20050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021) The employer is responsible for reporting to HMRC any taxes and National Insurance payments owed on the asset's best estimate of value. (CRYPTO20050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). Best estimate value of the crypto assets will be included in the earnings of the individual taxpayer and will be taxed appropriately based on the applicable rate.	Companies are subject to Corporation Tax on their profits and gains with profits on the transaction included as a revenue receipt in respect of that trade (CRYPTO41050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). Companies are mandated to calculate the gain or loss on disposal of crypto assets to determine whether they are liable to pay Corporation Tax. The normal rate of corporation tax is 19% for the year beginning 1 April 2021. The profit on trading of crypto assets will be taxed at a rate of 19% respectively.
Germany	Crypto assets are recognised as private assets and attract taxation from an Income Tax perspective. (Germany Crypto Tax Guide 2022 | Koinly, 2022).			Cryptocurrency profits are treated as income from business

	Individual – Held for Trading Purposes	**Individual – Held for Capital Appreciation**	**Individual – Employment Purposes**	**Corporate Taxation**
	Profits from the sale of cryptocurrencies are not considered as capital assets from a German tax perspective and are recognised as a private sales transaction. German crypto gains are completely tax exempt after a holding period of one year as they are considered as a private sale (Germany Crypto Tax Guide 2022 | Koinly, 2022). The holding period of cryptocurrencies is of the outmost importance as it decides whether they are taxable. If cryptocurrency is held for more than one year and then it is sold, any profits generated remain tax-free and must not be declared on your tax return (Cryptocurrencies in Your German Tax Return, 2021).			operations (Cryptocurrencies in Your German Tax Return, 2022) Depending on the legal form of the company, profits generated by the sale of crypto assets are subject to income tax or corporate tax (Hornung, 2022)

In essence, the United Kingdom and French authorities have adopted similar stances in regard to the taxation of crypto assets. Both taxing authorities subject Professional Traders to Income Tax on a progressive income tax rate (O'Rorke & Lourimi, 2021; CRYPTO20250 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021) whereas German Tax authorities account for the holding of all crypto assets as a private asset for which the profits from the sale are taxed from an Income Tax perspective.

Individual Taxpayers are subject to Capital Gains Tax from a French perspective when they are recognised as occasional traders of crypto assets (France Cryptocurrency Tax Guide 2021 | Koinly, 2022) whereas individuals from the United Kingdom are subject to Capital Gains Tax when crypto assets are held for personal investment purposes (CRYPTO20050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

All three taxing jurisdictions have adopted a similar stance to corporate taxation of crypto assets. Profits from crypto assets are liable to tax under the general corporation tax regime (Cryptocurrencies and Taxes in France: All There is to Know - ESILV Graduate School of Engineering, Paris, 2022) from a French perspective, whereas profits generated from business operations are then subject to income tax or corporate tax (Hornung, 2022) from a German perspective.

Chapter 5: Taxation of Crypto assets from a South African perspective.

The Intergovernmental Fintech Working Group's (IFWG) Crypto Assets Regulatory (CAR) Working Group (WG) has taken the position that South Africa should adopt a strategy to regulating crypto asset service providers which will in turn bring crypto assets under regulatory control (Intergovernmental Fintech Working Group, 2021). The CARWG agrees that crypto assets cannot escape South Africa's regulatory oversight. (Intergovernmental Fintech Working Group, 2021).

While crypto assets' viability to be used as a mean of exchange remains untested, the market has demonstrated resilience over the last 10 years with the use of crypto assets as an alternative investment instrument for local and cross – border purposes is gaining traction among retail consumers (Intergovernmental Fintech Working Group, 2021).

In addition, South Africa has taken the approach of installing its first Bitcoin vending machine, situated in Johannesburg, to enable users the ability to exchange bitcoins for rand (Van der Berg, 2021). A growing number of businesses are accepting bitcoins as a method of payment and this number is increasing dramatically (Berger, 2016).

This chapter aims to investigate the current tax regulatory framework available to taxpayers for the tax treatment of crypto assets. The chapter critically analyses the provisions within the Act and provides insight as to whether these provisions are sufficient in providing guidance for the correct treatment of crypto assets. Further to the above, the chapter investigates the proposed regulatory framework for crypto assets discussed by the Intergovernmental Fintech Working Group.

5.1 Background on regulatory framework regarding crypto assets in South Africa

The National Treasury of South Africa published a statement alerting the public to the dangers involved in dealing with crypto assets, also known as virtual currency at the time, and making investments in them (The Law Library of Congress, 2019). The public statement cautioned the general public about the dangers of using crypto assets for investing or conducting business and suggested that they exercise prudence in this area. (Intergovernmental Fintech Working Group, 2021). The tone of the statement is directly linked to the fact that there is no specific legislation or regulation available for the use of

crypto assets from a South African perspective (Intergovernmental Fintech Working Group, 2021).

In June 2021, the IFWG, through the CAR WG, published a position paper on crypto assets titled "*Position Paper on Crypto Assets"*. The position paper on crypto assets makes twenty five recommendations on how to bring crypto assets into the South African regulatory scope in a structured approach (Intergovernmental Fintech Working Group, 2021). It is believed that crypto asset related activities are to set to increase in the near future and the inaction by South African regulators may accelerate the creation of a parallel system that will remain unregulated (Intergovernmental Fintech Working Group, 2021).

There are essentially three options for the South African regulators when it comes to regulating crypto assets. These include the banning of crypto assets, the regulation of crypto assets or adopting the stance of doing nothing (Intergovernmental Fintech Working Group, 2021). The Financial Action Task Force (FATF) in 2015 has already cautioned against banning crypto asset related activities as this could lead to activities of this nature going underground and remaining unregulated (Intergovernmental Fintech Working Group, 2021).

Consistent with the international convention, the term 'crypto assets' is the preferred term of use form a South African context as it encompasses and includes these functions. (Intergovernmental Fintech Working Group, 2021). The definition of crypto assets includes stablecoins and emerging global stablecoins (Intergovernmental Fintech Working Group, 2021). The Financial Stability Board (FSB) defines a stablecoin as

> *"a crypto asset designed to maintain a stable value relative to another asset (typically a unit of currency or commodity) or a basket of assets"*

The decentralised nature of crypto assets means that they offer direct transactional abilities without the use of traditional financial intermediaries. The danger associated with an ununified international regulatory approach as well as with differing jurisdictions reacting with a varying degree of stringency may lead to users of crypto assets to migrate to less stringent jurisdictions (Intergovernmental Fintech Working Group, 2021).

5.1.1 Description of Uses of Crypto Assets in South Africa

To develop appropriate regulatory frameworks and policy approaches to crypto assets in South Africa, the CAR WG conducted an analysis of the economic function of crypto assets. The following five crypto asset-specific use cases were identified:

i. *"buying and/or selling of crypto assets by individual consumers and legal persons;*
ii. *payments using crypto assets;*
iii. *capital raising through Initial Coin Offerings;*
iv. *crypto asset funds and derivatives; and*
v. *crypto assets market support." (Intergovernmental Fintech Working Group, 2021)*

5.1.1.1 Buying and/or selling of crypto assets

Crypto assets are purchased for a variety of reasons, including for speculative investing, a means of exchange for certain goods, services, and utilities, as well as a means of expediting transactions involving goods and/or services

Crypto Asset Service Providers facilitate the trading of crypto assets. These providers include but are not limited to:

i. "*the purchase, selling or transferring of crypto assets, including the use of crypto asset vending machine facilities (Intergovernmental Fintech Working Group, 2021);*
ii. *the trading, conversion or exchange of fiat currency or other store of value into crypto assets (Intergovernmental Fintech Working Group, 2021);*
iii. *the trading, conversion, or exchange of crypto assets into fiat currency or other store of value (Intergovernmental Fintech Working Group, 2021); and*
iv. *the trading, conversion, or exchange of crypto assets into other crypto assets" (Intergovernmental Fintech Working Group, 2021).*

5.1.1.2 Payment using of crypto assets

This IFWG identifies CASPs that facilitate payment for goods and services using crypto assets as a mean of exchange for goods and services (Intergovernmental Fintech Working Group, 2021). CASP's includes all forms of entities that provide payment services using crypto assets as their means of exchange (Intergovernmental Fintech Working Group, 2021).

This includes person to person transfers via domestic remittances and international remittances for person to person cross border transfers (Intergovernmental Fintech Working Group, 2021).

In the absence of established regulatory framework for South Africa, the discretion to accept crypto assets as a means of exchange is at the sole discretion of merchants. Although not widespread, crypto assets have been accepted as means of exchange at certain physical and online stores in South Africa (Intergovernmental Fintech Working Group, 2021). An example of the growth in the crypto industry is that several online retailers, such as Takealot, are now accepting Bitcoins as a means of payment (Wicht, 2016).

Retailers prefer to outsource the processing of crypto asset related transactions to third party service providers so that crypto asset payments can be accepted (Intergovernmental Fintech Working Group, 2021). The third party technical provider would be responsible for the back end conversion process to exchange the crypto asset into conventional fiat currency (Intergovernmental Fintech Working Group, 2021). These companies are essentially contracted by merchants commissioned by retailers to offer services for crypto asset including acceptance, settlement, and reconciliation (Intergovernmental Fintech Working Group, 2021).

5.1.1.3 Initial Coin Offerings

Initial Coin Offerings (ICO), also commonly referred to as token launch, are a means to generate capital (Intergovernmental Fintech Working Group, 202). They describe the process where a firm sells a predefined number of tokens in exchange for other crypto assets (Intergovernmental Fintech Working Group, 2021). The issuer typically collects the funds to finance a project and in exchange for financing, the investor receives a token which has certain rights to receive value (Intergovernmental Fintech Working Group, 2021).

Raising capital through an ICO can be used as an alternative than via the conventional method of classic debt or capital funding processes provided by venture capitalists, private equity firms and established financial institutions (Intergovernmental Fintech Working Group, 2021). Dependant on the type of token that is issued for the ICO, governs the treatment from legal perspective.

5.1.1.4 Crypto asset funds and derivatives

Crypto assets can be used as an underlying asset in investment funds, including hedge funds, private equity funds, pension funds and collective investment schemes (Intergovernmental Fintech Working Group, 2021). However, the current regulatory framework restricts these forms of vehicles to hold crypto assets in terms of the Collective Investment Schemes Control Act 45 of 2002, regulation 28 of the Pension Funds Act 24 of 1956, and the Financial Markets Act 19 of 2012 (FMA), which excludes crypto assets from its definition of securities (Intergovernmental Fintech Working Group, 2021).

The Collective Investment Schemes Control Act 45 of 2002 defines exchange securities as

> *"Securities which are listed, and authorised to be dealt in an exchange, and the prices of which are quoted in a list issued for publication by such exchange".*

Further to the above, the Financial Markets Act 19 of 2012 defines securities as:

i. *"listed and unlisted;*
ii. *shares, depository receipts and other equivalent equities in public companies, other than shares in a share block company as defined in the Share Blocks Control Act, 1980 (Act No. 59 of 1980);*
iii. *debentures, and bonds issued by public companies, public state-owned enterprises, the South African Reserve Bank and the Government of the Republic of South Africa;*
iv. *derivative instruments;*
v. *notes;*
vi. *participatory interests in a collective investment scheme as defined in the Collective Investment Schemes Control Act, 2002 (Act No. 45 of 2002), and units or any other form of participation in a foreign collective investment scheme approved by the Authority in terms of section 65 of that Act;*
vii. *instruments based on an index."*

The Financial Markets Act of 2012 and the Collective Investment Schemes Control Act of 2002 do not include crypto assets in their definitions of securities. The IFWG opposes the use of crypto assets as derivatives due to their price volatility, consumers' lack of knowledge of these assets, and the risks connected with financial crime and market manipulation (Intergovernmental Fintech Working Group, 2021).

5.1.1.5 Crypto asset market support services

The IFWG identifies Crypto Asset Service Providers (CASPs) that offer any market support services for crypto asset related activities. Services such as crypto asset mining, digital wallet provisioning, and secure custody services are a few examples of these operations. (Intergovernmental Fintech Working Group, 2021)

Services regarding safe custody for crypto assets can be performed by existing CATPs, standalone entities specialising in such services, or any other entity that intends to provide these form of services to client within a legal arrangement. (Intergovernmental Fintech Working Group, 2021).

5.1.1.6 Principles for regulating crypto assets and crypto asset service providers

Following concepts serve as a foundation for South Africa's regulatory approach to crypto assets and CASPs:

i. Adopting a risk-based approach: Regulations will be implemented in a way that is proportionate to the degree of danger posed while weighing the advantages connected.
ii. Adopting a unified regulatory approach: The embraced a regulatory approach should be a unified and collaboration between all relevant regulatory bodies.
iii. Adopting a phased approach: All impacted regulatory authorities should work together in unison to develop the regulatory strategy.
iv. Being technology-neutral to the extent possible and primarily principles-based: Reliance should be based on broader, high level principles rather than that of extremely detailed and prescriptive rules
v. Being resilient and adaptive: All new laws and regulations should include provisions for modifications to this environment that can be used with current technologies. This legislation should be adaptive to all existing technologies.

5.1.1.7 Overall policy position for crypto assets and crypto asset service providers in South Africa and general recommendations

South African regulatory authorities represented on the IFWG have acknowledged that crypto assets are a new financial innovation for which accommodation in the current regulatory framework is of the outmost importance where sufficient regulatory safeguards can be implemented (Intergovernmental Fintech Working Group, 2021).

The regulatory strategy that will be used by the individual government regulators is outlined in the policy stance. The policy position took into account both current legal and regulatory frameworks and emerging regulations, such as the CoFI Bill and the 2020 Financial Markets Review (Intergovernmental Fintech Working Group, 2021).

The proposals by the Intergovernmental Fintech Working Group in this regard focus on amendments to the Exchange Control Regulations and include:

i. Enabling the SARB to take on the oversight and control functions related to the regulation of international financial transactions involving services related to cryptocurrencies (Mukumba, 2021).
ii. Adding crypto assets to the definition of "capital" for the purposes of Excon Regulation 10(1) by amending Excon Regulation 10(4). (c) (Mukumba, 2021).
iii. allowing Excon Regulations participants to spend their sole discretionary budget on crypto assets single discretionary allowance of R 1 million or foreign capital allowance of R 10 million (Mukumba, 2021).
iv. To enable cross-border trade and transactions involving crypto assets in South African Rand, the authorised dealers with constrained authority should be expanded to include crypto asset trading platforms (CATPs). (Mukumba, 2021).
v. Introduction of requirements for CATPs to report crypto transactions to the SARB (Mukumba, 2021).
vi. The Excon Regulations should be changed to permit licensed CATPs to source or purchase crypto assets abroad with the intention of reselling them to the local market. (Mukumba, 2021).

5.2 Crypto Asset Classification: Currency vs Asset

If one considers the fundamental features and characteristics of crypto assets, including cryptocurrencies such as Bitcoin, we need to determine whether they fall within the scope of currency or asset. The Income Tax Act does not define "currency" for the purposes of the tax consequences linked with currency (Wicht, 2016). However, paragraph (b) of section 24I of the South African Income Tax Act no. 58 of 1962 (Income Tax Act) ”local currency” is defined as “currency of the Republic”. This section defines” foreign currency” on the other hand as “…any currency which is not local currency”.

Section 15(1) of the South African Reserve Bank Act 99 of 1989 states that the monetary unit of the Republic of South Africa is the Rand. According to the South African Reserve Bank, cryptocurrencies do not qualify as money or capital. under the Exchange Regulations, 1961 (Excon Regulations) (Mukumba, 2021).

Synonyms of currency include money, legal tender and medium of exchange (Wicht, 2016). As per the frequently asked questions about crypto assets released by the IFWG, money is defined as legal tender, which in turn, is defined as:

> “ *A tender, including a tender by the [South African Reserve] Bank itself, of a note of the Bank or of an outstanding note of another bank for which the Bank has assumed liability in terms of section 15 (3) (c) of the Currency and Banking Act or in terms of any agreement entered into with another bank before or after the commencement of this Act, shall be a legal tender of payment of an amount equal to the amount specified on the note.”*

From as South African perspective, legal tender is limited to banknotes and coin issued by the South African Reserve Bank (National Treasury, 2021).. From a legal perspective, crypto assets are not recognised or viewed as money as defined (National Treasury, 2021). Therefore, based on the above, crypto assets do not fall within the ambit of currency.

Paragraph one of Schedule Eight of the Income Act defines an asset as:

a) *“property of whatever nature, whether movable or immovable, corporeal or incorporeal, excluding any currency, but including any coin made mainly from gold or platinum; and*
b) *a right or interest of whatever nature to or in such property”.*

Capital Gains Tax is not triggered until such a point where an asset is disposed of and therefore the definition of an asset is of the outmost importance. The definition of asset has been given a wide berth, encompassing all types of property as well as any rights to or interests in such property (Comprehensive Guide to Capital Gains Tax (Issue 9), 2021).

It is submitted that the word 'property' refers to "*anything that can be disposed of and turned into money*" (Comprehensive Guide to Capital Gains Tax (Issue 9), 2021). The nature of crypto assets allows specified tokens to be traded and disposed of in exchange of money. Tokens, such as exchange tokens, possess the characteristics to be used as a mean of exchange (Financial Conduct Authority of the United Kingdom, 2019). While other forms of crypto asset such as security tokens have characteristics closely associated with debt and equity instruments with income generating components.

The SARS guide on Capital Gains states that currency is excluded from the definition of asset as per the Eighth Schedule. As per Section 1 of the Income Tax Act, Trading Stock is defined as

> *"anything produced, manufactured, constructed, assembled, purchased or in any other manner acquired by a taxpayer for the purposes of manufacture, sale or exchange by the taxpayer or on behalf of the taxpayer;… any consumable stores and spare parts acquired by the taxpayer to be used or consumed in the course of the taxpayer's trade, excluding a foreign currency option contract; or a forward exchange contract, as defined in section 24I (1)"*

In terms of the current tax legislation, an asset that is excluded from the definition of asset as per the Eighth Schedule is currency, which includes coins made from gold or platinum because of their value and properties.

The definition of "asset" under the Eighth Schedule of the Income Tax Act appears to be broad enough to encompass digital money like Bitcoins as a type of property (Berger, 2016). Virtual currencies, such as Bitcoin, fall into the wider range of crypto assets and dependant on their individualistic characteristics, will fall within the ambit of a utility token, security token or an exchange token. SARS viewpoint is that crypto assets are not currency in the South African context; however, it is regarded as an asset/trading stock for tax purposes (FAQs: Crypto assets, 2021).

The inclusion of cryptocurrency in the definition of 'financial instrument' has given legislative effect for which SARS classifies crypto assets as assets and not as a currency (Haupt, 2022; SARS, 2021) for South African normal tax purposes. It therefore appears reasonable that crypto assets are regarded as assets under the definition of asset as per the Eighth Schedule of the Income Tax Act) and may attract Capital Gains Tax. The inclusion of crypto assets within the definition of financial instrument under section 1 of the Income Tax Act further strengthens the notion of crypto assets being recognised as assets as defined.

5.3 Capital vs Revenue in nature

5.3.1 Intention

The intention of the taxpayer remains the outmost importance in determining whether an amount relating to a crypto asset transaction is considered income or capital in nature (Berger, 2016; Coelho, 2017; Wicht, 2016). Amounts must either be reported as gross income, as that term is defined in section one of the Income Tax Act, or as income derived from capital, which is subject to capital gains tax under the Eighth Schedule, in order to be taxable under the Income Tax Act.

In accordance with ITC 1185 (1972) 35 SATC 122, the taxpayer's intent while purchasing the asset is the key factor in deciding whether an amount is classed as capital or revenue nature.. In CIR v Stott 1928 AD 252, 3 SATC 253 at 254, it was stated:

> *"The primary intention with which property is acquired is conclusive as to the nature of the receipt arising from the realisation of that property unless other factors intervene which show that it was sold in pursuance of a scheme of profit-making".*

A guideline often determining the difference between income and capital was eloquently captured by Matitz J in the judgement handed down in CIR vs Visser (CIR v 1937 TPD 77, 8 SATC 271) (Croome, et al, 2015c). The CIR vs Visser stated the following:

> *"If we take the economic meaning of "capital" and "income" the one excludes the other. "Income" is what "capital" produces or is something in the nature of interest or fruit as opposed to principal or tree. According to this approach, income is produced as a result of the employment of capital such as interest (income) derived from money in the bank (capital)."*

Crypto assets are defined as a "financial instrument" in the Income Tax Act, as opposed to "currency" which would have excluded crypto gains from the ambit of Capital Gains Tax (Chong & Moolman, 2021). The intention of the taxpayer would determine whether the crypto gains are gross income in nature and taxed at a maximum rate of 45% or capital in nature which is taxed at a maximum rate of 18% (Chong & Moolman, 2021). Supporting factors such as the length of holding of the assets and the frequency of trades are also analysed in determining the intention of the taxpayer.

5.3.2 Gross Income

In relation to either a resident or non-resident taxpayer, gross income comprises an amount

"*in cash or otherwise and has been held to include every form of property earned by the taxpayer, whether corporeal or incorporeal, which has a money value […] including debts and rights of action* "(WH Lategan v CIR 1926 CPD 203 209, 1926).

Gross income is a key factor in determining whether a certain amount is included in a taxpayer's taxable income. Section 1 of the Income Tax Act defines gross income as:

> *"… in relation to any year of assessment, means –*
>
> *i. In the case of any resident, the total amount, in cash or otherwise, received by or accrued to or in favour of such resident; or*
> *ii. In the case of any person other than a resident, the total amount, in cash or otherwise, received by or accrued to or in favour of such person from a source within or deemed to be within the Republic, during such year of period of assessment, excluding receipts or accruals of a capital nature".*

The first element of the definition is 'the total amount in cash or otherwise'. As per the definition, an amount needs to be received by or accrued to the taxpayer in the tax year of assessment to be included in their gross income (Wicht, 2016). Gross Income does not need be an actual amount in money but may constitute "*every form of property earned by the taxpayer, whether corporeal or incorporeal, which has a money value… including debts and rights of action*" (WH Lategan v CIR 1926 CPD 203 209, 1926).

Consequently, if an asset rather than cash is received, the value of the assets should be included in gross income of the taxpayer (Pienaar & Steyn, 2010). Consequently, the asset

can be of any nature provided that it can be converted into money (Pienaar & Steyn, 2010; WH Lategan v CIR 1926 CPD 203 209, 1926).

The gross income definition further stipulates that money must be received by or accrued to a taxpayer. The phrase "received by or accrued to" in the definition makes it clear that both receipts and accruals are covered by the term (Stigllingh, et al., 2016e). In Geldenhuys v CIR (1947 (3) SA 256 (C), 14 SATC 419), it was held that the words 'received by' indicate that the taxpayer should have received the amount "on his own behalf and for his own benefit".

In SARS v Cape Consumers (Pty) Ltd (61 SATC 91.), it was held that

"*there would be no receipt or accrual if a person has not received an amount, or it has not accrued to him for his own benefit*" (Stiglingh, et al., 2016e).

In Lategan v CIR (1926 CPD), it was held that the meaning of the words 'accrued to' was 'entitled to' (Stiglingh, et al., 2016e). The principle that has evolved from this case is that regardless of whether an amount is due and payable in a later year of assessment, it is included in the taxpayer's gross income in the year of assessment in which the taxpayer becomes entitled to it (Stiglingh, et al., 2016e). If the taxpayer must fulfil a requirement in order to receive an amount, it is not unconditional and does not accrue to the taxpayer (CIR v People's Stores (Walvis Bay) (Pty) Ltd, 1990 (2) SA 353 (A), 52 SATC 9 at 21)

The golden rule utilised in determining whether an amount is capital or income in nature is the intention of the taxpayer. Proceeds will be classified as income in nature if the purpose of acquisition of the asset was for selling it at a profit (Stiglingh, et al., 2016f). However, if the asset was acquired and held to produce income from that asset, and not for resale of profit, then the proceeds on disposal will be capital in nature (Stiglingh, et al., 2016f).

Despite not being recognised as a legal tender and SARS recognising cryptocurrency as an asset for income tax purposes, it can be seen that the receipt of cryptocurrency is included gross income and taxed accordingly (Singh, 2019). If crypto asset is received or accrued as a revenue asset, its rand value on the date of receipt or accrual will be subject to the inclusion of the taxpayer's gross income under the Income Tax Act (Moosa, 2019).

Security Tokens are more similar to financial instruments than they are to cash (Deloitte, 2021) and can be regarded as assets that guarantee ownership, dividend payments, or the right to a portion in future profits (Mondaq, 2020). The economic substance of security tokens suggest that this type of asset possesses traits akin to traditional securities. Security Tokens

bought for the sole purpose of resale at a profit will be subject to taxation in which the profit will be of a revenue nature (Crypto Assets: How you are taxed, 2021) similair to that of convential shares purchased for resale as part of a scheme of profit-making (Warneke, 2021).

Tokens intended for exchange or payment for the purchase of goods and services are known as exchange tokens (Financial Conduct Authority of the United Kingdom, 2019). Where the taxpayer utilises exchange tokens to purchase goods and services, the amount to be included in the taxpayer's gross income will be equal to the market value of the goods or services obtained. (Basson, 2020; Wicht 2016).

Utility Tokens can be redeemed for access to a specific product or service (Financial Conduct Authority of the United Kingdom, 2019) and are a pre-paid right to consume an issuer's goods or services (Parrondo, 2019). As with the other tokens in question, Utility tokens bought for the sole purpose of resale at a profit will be subject to taxation in which the profit will be of a revenue nature (Warneke, 2021).

The term "trade" is defined under section one of the South African Income Tax Act and includes "every profession, trade, business, employment, calling, occupation or venture, including the letting of any property and the use of or the grant of permission to use any patent… or any design… or any trademark…, or any copyright…, or any other property which is of a similar nature". If the intention of the taxpayer is to utilise crypto asset tokens for the purpose of trade, i.e., trading of crypto asset tokens on a full time basis or mining of crypto asset tokens, the revenue generated from such trade will be included in the gross income of the taxpayer and will be taxed at the applicable rate.

Crypto mining is the process through which transactions are verified and addended to a public ledger through the use of cryptographic techniques, with 'miners' being rewarded with newly minted crypto assets (Intergovernmental Fintech Working Group, 2021). If a taxpayer derives Security, Exchange or Utility tokens from mining, then the gains yielded from the activity will be subject to income tax implications as mining is constituted as a trade (Chong & Moolman, 2021).

In the case of South Africa, normal income tax and capital gains tax rules have been flexible enough to apply to crypto-asset transactions and onus has been on taxpayers to declare crypto asset transactions (Salami, n.d.). Therefore, crypto assets held for the intention of generating a profit for a taxpayer or utilised in a form of trade for the taxpayer will be accounted for as income and will be included in the gross income of the taxpayer. If the taxpayer conducts

business or trades in crypto assets, the crypto assets will be regarded as trading stock (Stiglingh, 2021).

5.3.2.1 Crypto Assets held as Trading Stock

According to the definition of "gross income" in section 1(1) of the Income Tax Act, the proceeds from the sale of digital assets held as trading stock are included in the taxpayer's gross income (Basson, 2020; Berger 2016). Section 1 of the Income Tax Act's definition of "trading stock" is broad enough to accommodate digital currencies like Bitcoins (Berger, 2016).

Taxpayers mine crypto assets with the primary goal of making money or earning a profit from this activity (Parsons, 2014). The position adopted by SARS seems to consider the "mining" of crypto assets as a form of income, where the accrual or receipt on successful mining of crypto assets will give rise to the accrual or receipt, which is then accounted for as "trading stock" by the miner (Warneke, 2021).

The income generated from the sale of a particular crypto asset may qualify as gross income under section 1 of the Income Tax Act if the taxpayer intends to purchase it with the objective of making a profit for trade purposes (Lobban, 2018). When a taxpayer disposes a crypto asset in the normal course of business, the proceeds will be considered revenue in nature and will be reported as such (Lobban, 2018). The gains made from the sale of tokens will be included in the taxpayer's gross income if they are in the trade of purchasing and selling them for trade purposes. But if the taxpayer wants to hold on to the asset for unspecified period of time for capital appreciation the sale of such an asset for a profit will be regarded as capital in nature (Lobban, 2018).

5.3.2.2 Deductions available to the Taxpayer

Expenses associated with crypto assets can be claimed as a tax deduction if the requirements of S11(a) of the Income Tax Act are complied with (Stiglingh, 2021). The conditions of section 11(a), read in conjunction with section 23(g) of the South African Income Tax Act, must be met in order to claim the deduction for any costs incurred in obtaining crypto assets. (Berger, 2016). Section 11(a) of the Income Tax Act reads:

> *"For the purpose of determining the taxable income derived by any person from carrying on any trade, there shall be allowed as deductions from the income of such person so derived—*

a) *expenditure and losses actually incurred in the production of the income, provided such expenditure and losses are not of a capital nature".*

The main determinant of whether an expense is deductible under S11(a) is whether the expense was incurred in the production of income. Section 23(g) of The Income Tax Act expressly forbids the deduction of funds that were not used for business and income-generating purposes (Berger, 2016).

Port Elizabeth Electric Tramway Company Ltd v CIR 1936 CPD 241, 8 SATC 13 lays out the foundation for which expenditure can be deductible. The court determined that an expense is deductible under Section 11(a) if it is relevant to the production of income and whether it was directly related to the act of producing income (Port Elizabeth Electric Tramway Company Ltd v CIR 1936)

In Burgess v CIR (1993) 55 SATC 185, it was held that *"it is well established that the definition of 'trade' should have a broad connotation and includes a 'venture', which is a transaction where an individual takes a risk in order to generate a profit*" (Burgess v CIR (1993) 55 SATC 185). Therefore, any expenditure related to the carrying on of a trade for the purpose of generating income can be deducted under the premise of S 11 (a). An example of this is a taxpayer involved in the process of mining crypto asset tokens, such as, exchange tokens, security tokens or utility tokens.

5.3.3 Capital in Nature

Capital gains and losses on the disposal of assets are subject to Capital Gains Tax (CGT) as per the Eighth Schedule of the Income Tax Act. Section 26A of the Income Tax Act provides that any capital gain is required to be included in the taxpayer's taxable income for that tax year of assessment (Wicht, 2016). The words 'of a capital nature' are relevant for determining what is taxed under income under sections of the Act and what is taxed under the capital account under the Eighth Schedule (Comprehensive Guide to Capital Gains Tax (Issue 9), 2021). As per paragraph 3 (a) of the Act, a Capital Gain will arise for a year of assessment, in respect of the disposal of an asset, and is equal to the amount by which the proceeds received or accrued in respect of that disposal, exceed the base cost of that asset (Comprehensive Guide to Capital Gains Tax (Issue 9), 2021).

Crypto assets can be purchased and retained for long-term capital growth. In this scenario, disposing of crypto assets will yield a capital gain or loss (Warneke, 2021). An asset is likely to be classified as capital in nature in which:

> *"it is held for a usually indeterminate, longer term; not necessarily devoid of a conscious desire to sell."* (John Bell & Co (Pty) Ltd v SIR 1976 4 SA 415 (A); CSARS v Volkswagen of South Africa (Pty) Ltd 2001 (2) SA 42 (SCA)).

As previously mentioned, Security Tokens possess similar characteristics to that of traditional securities which is essentially a regulated offering of securities using blockchain technology (Deloitte, 2020). Unless for regular trading purposes, traditional securities are held by taxpayers for investment purposes. Security Tokens held for capital appreciation will attract Capital Gains Tax on the profits realised from the sale of these tokens for which a capital gain or loss is likely to arise (Warneke, 2021).

Utility Tokens and Asset Backed Tokens held by the Taxpayer of investment purposes will be identified as Capital Assets. A taxpayer would be required to account for the capital gain or loss implications on the sale of crypto asset held for capital appreciation in accordance with the provisions of the Eighth Schedule of Income Tax Act (Mukumba, 2021).

Paragraph 2 of the Eighth Schedule of the Income Tax Act specifies that the disposal will be subject to the rules of this schedule on or after the valuation date of "any asset of a resident…and…any asset which is attributable to a permanent establishment of that person in the Republic" (Comprehensive Guide to Capital Gains Tax, 2022).

Paragraph 3 of the Eighth Schedule of the Income Tax Act states that:

> *"a capital gain will arise for a specified tax year of assessment, in respect of the disposal of an asset. The capital gain or loss is equivalent to the proceeds received or accrued to the taxpayer for the disposal of the asset less the base cost of the asset."*

Paragraph 1 of the Eighth Schedule of the Income Tax Act defines a disposal as:

> *"11. Disposals. — (1) Subject to subparagraph (2), a disposal is any event, act, forbearance or operation of law which results in the creation, variation, transfer or extinction of an asset, and includes—*

a) *the sale, donation, expropriation, conversion, grant, cession, exchange or any other alienation or transfer of ownership of an asset;*
b) *the forfeiture, termination, redemption, cancellation, surrender, discharge, relinquishment, release, waiver, renunciation, expiry or abandonment of an asset;*
c) *the scrapping, loss, or destruction of an asset;*
d) *the vesting of an interest in an asset of a trust in a beneficiary;*
e) *the distribution of an asset by a company to a holder of shares;*
f) *the granting, renewal, extension or exercise of an option; or*
g) *the decrease in value of a person's interest in a company, trust or partnership as a result of a value shifting arrangement."*

The disposal of crypto as a financial instrument can be categorised as a taxable event (Chong & Moolman, 2021). A difficulty may arise for taxpayers in proving that their crypto investments fall in the ambit of Capital Gains, due to the fact that there are no capital gains tax deeming rules in the Income Tax Act for crypto assets, such as the three-year rule for equity shares (Chong & Moolman, 2021). In terms of paragraph 53(3)(e) of the Eighth Schedule, the definition of personal-use assets does not include financial instruments (Basson, 2020). A person who acquires crypto assets as a financial instrument for personal use is not permitted to ignore the gain or loss that results under the terms of paragraph 53 of the Eighth Schedule (Basson, 2020).

As discussed, crypto assets fall within the scope of the definition of an asset as per the Income Tax Act and assets such as Exchange, Utility and Security tokens fall within the ambit of an asset as defined under paragraph 1 of the Eighth ScheduleIt is crucial to keep in mind that one has to analyse the taxpayers intention not only at the date of disposal of the asset, but also at the time the taxpayer acquired the asset and during the taxpayer's ownership of the asset (Berger, 2016).

Paragraph 35 of the Eighth Schedule of the Income Tax Act defines that

> *"proceeds from the disposal of an asset by a person is equal to the amount received by, or accrued to, or which is treated as having been received by or accrued to or in favour of, that person in respect of that disposal."*

In WH Lategan v. CIR, the legal concept of "amount" as it relates to the term "gross income" was examined and the following dictum of Watermeyer J has been cited: (CIR v People's Stores (Walvis Bay) (Pty) Ltd 1990 (2) SA 353 (A), 52 SATC 9 at 21; CIR v Butcher Bros (Pty) Ltd 1945 AD 301)

> *"In my opinion, the word 'amount' must be given a wider meaning, and must include not only money but the value of every form of property earned by the taxpayer, whether corporeal or incorporeal, which has a money value"*

Based on the above, proceeds equate to the amount that is received by the disposer of the specified crypto assets. The proceeds are normally equal to the amount received or accrued on disposal of the crypto asset token. According to Lobban (2018), paragraph 20 of the Eighth Schedule, which outlines what is included and excluded in an asset's base cost, should be read in conjunction with paragraph 32 when assessing the base cost of identical assets Lobban (2018). The primary approach for calculating the base cost of post-valuation date assets can be referenced from paragraph 20 of the Eighth Schedule (Lobban, 2018).

The base cost of an asset acquired on or after 1 October 2001 contains the actual expenditure incurred on the asset. Such expenditure must appear on the list of qualifying expenditure under paragraph 20 of the Eighth Schedule in order to be eligible for inclusion in the base cost.. Primary expenses that might be included in an asset's base cost are:

i. "*the costs of acquisition or creation of the asset.*

ii. *the cost of valuing the asset for the purpose of determining a capital gain or capital loss.*

iii. *the following amounts actually incurred as expenditure directly related to the acquisition or disposal of the asset, namely –*

a) *the remuneration of a surveyor, valuer, auctioneer, accountant, broker, agent, consultant or legal advisor, for services rendered;*

b) *transfer costs;*

c) *securities transfer tax, transfer duty or similar tax or duty;*

d) *advertising costs to find a seller or to find a buyer;*

e) *the cost of moving the asset from one location to another;*

f) *installation costs including foundations and supporting structures;*

g) *donations tax limited by a formula;*

h) *cost of an option used to acquire or dispose of the asset;*
i) *cost of establishing, maintaining or defending a legal title to or right in the asset;*
j) *cost of effecting an improvement to or enhancement of the value of the asset; and*
k) *value-added tax incurred on an asset and not claimed as an input tax credit for value-added tax purposes." (Comprehensive Guide to Capital Gains Tax, 2022)*

Methods for allocating expenditures to identical assets at their disposal are provided in paragraph 32 (Lobban, 2018). For the purposes of paragraph 32, "identical assets" means

> *"a group of similar assets which—*
>
> a) *if any one of them were disposed of, would realise the same amount regardless of which of them was so disposed of; and*
> b) *are not able to be individually distinguished apart from any identifying numbers which they may bear."*

Identical assets are defined under paragraph 32 of the Eighth Schedule as:

> *"a group of similar assets that are not individually distinguishable other than by identifying numbers that they may bear. Alternatively, if any particular asset from a group was disposed of, it would realise the same amount regardless of which of the assets in the group was so disposed of* "(Holdings of identical assets, 2021).

Identical assets are those that satisfy two tests; first, that if any of the holding's assets were sold, they would bring in the same amount as any other asset in that group; second, that the assets are not individually distinguishable, apart from any identifying numbers that they may carry (Croome, 2015d). Crypto assets, such as exchange tokens, security tokens and utility tokens that are held by a taxpayer fall within the scope of an identical asset as they are assets that are not individually distinguishable.

As per Paragraph 32(2) of the Eighth Schedule, three methods can be utilised in the determination of the base cost of identical assets (Lobban, 2018). These include specific

identification, First In First Out (FIFO) or weighted average method respectively, similar to the cost of trading stock as above (Lobban, 2018).

Only identical assets that are listed in a recognised exchange, including a participatory stake in an unlisted asset as part of a collective investment or a coin made of gold or platinum, are eligible for the weighted average approach (Lobban, 2018). Since crypto asset do not match the criteria specified, the weighted average approach will not be applicable (Lobban, 2018). The same is applicable to crypto assets due to the fact that crypto assets are traded on unregulated exchanges and do not meet the requirements under paragraph 32(3A) of the Eighth Schedule of the Income Tax Act.

When it comes to CGT, the FIFO method includes allocating expenses incurred for the asset in accordance with paragraph 20 to the base cost of an asset (Lobban, 2018). Under the FIFO method, it is assumed that the oldest asset held is sold first. The FIFO approach is a reliable and efficient way to determine the base cost of an identical asset under paragraph 32(3)(b) of the Eighth Schedule (Lobban, 2018). In conclusion, the total of the proceeds from the disposal of the asset less its associated base cost equates to the amount that must be included in a taxpayer's taxable income for CGT purposes (Lobban, 2018).

The Capital Gains Tax inclusion rate for natural persons and special trusts is 40%, and for other taxpayers such as Companies, Closed Corporations, Public Benefit Corporations is 80%. Consequently, the inclusion rate is multiplied by the capital gain and included in the taxpayer’s income tax calculation.

5.4 Analysis and Findings

5.4.1 Crypto Assets held by the Taxpayer for Professional Trading Purposes

With reference to the French taxing regime, when the purchase and sale of a digital assets is carried out on a professional basis, the gains are subject to the progressive income tax rate (O’Rorke & Lourimi, 2021). Income generated from the sale of crypto assets will be subject to income tax rates as per French tax laws. Comparably, the United Kingdom tax authorities have stated that the Taxpayer is taxed in their personal capacity on any profits or loss that are incurred in the carrying on of a trade and in which Income Tax rules would take priority. German tax authorities have assumed a similar stance for which profits from crypto assets are not comparable to traditional financial investments like shares or funds because they are not

viewed as capital assets but rather as private sales transactions. (Cryptocurrencies in Your German Tax Return, 2021).

The Taxpayers actions would be an important indicator of that person's intention (Haupt, 2022). Each jurisdiction highlights the factors surrounding the intention of the Taxpayer and whether crypto asset trades are constituted as a scheme of profit making. The United Kingdom uses a Badges of Trade system which have been used in the past for determining if buying and selling shares amounts to a trade (Schiavone, n.d.) while French taxing authorities analyse the frequency and automation of the sale of crypto assets in determining whether an individual taxpayer is accounted for as a professional trader (O'Rorke & Lourimi, 2021).

From a South African perspective, the taxpayer bears the onus to prove that the amounts in question are capital and not revenue in nature in terms of s 102 of the Tax Administration Act 28 of 2011. If the taxpayer regularly sells crypto assets, the presumption is that the taxpayer's intention is to make a trading profit and is taxable as a revenue profit (Haupt, 2022) whereas if the taxpayer neither sells, exchanges nor spends the crypto asset, the indication is that taxpayer is holding it as a store of value and therefore as a capital asset (Haupt, 2022) and is subject to Capital Gains Tax.

The consensus from the South African, French, United Kingdom and German taxing authorities would suggest that profits yielded from the professional trade of crypto assets would lead to the inclusion of profits in the taxpayers Income for the tax year of assessment. The profits from the trade of crypto assets will be subjected to income tax for each taxpayer and included in their income for the tax year of assessment.

5.4.2 Crypto Assets held by the Taxpayer for Investment Purposes

The United Kingdom, South Africa and France have adopted similar taxing approaches for the disposal of crypto assets held for capital appreciation. As per the guidance provided under the *loi Pacte*, occasional traders are subject to Capital Gains realised as part of an individual's private asset management whereas United Kingdom taxpayers are subject to Capital Gain Tax when crypto assets are held for investment purposes (CRYPTO20050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

The capital gain realised on the sale of crypto assets from a French perspective is equal to the difference between the sales price and the total price of acquisition of the entire portfolio of digital assets with a fixed rate of 30% being applied to the annual total capital gain from the

sale of digital assets which is taxed at the same rate of securities (O'Rorke & Lourimi, 2021). In the United Kingdom, the Capital Gain is equal to an amount by which the disposal value of a chargeable asset exceeds its acquisition value of the crypto asset, with the rate of Capital Gains tax charged upon the disposal of an asset being 10% if the taxpayer falls within the basic income tax band and 20% if the taxpayer falls into a tax band that is greater than the basic income tax band.

From a South African perspective, crypto assets purchased and held for the purpose of long-term investment will be liable to capital gains tax upon sale of the crypto asset. (Warneke, 2021).). Paragraph 3 of the Eighth Schedule of the Income Tax Act states that a capital gain will arise for a specified tax year of assessment, with the capital gain or loss being equivalent to the proceeds received or accrued to the taxpayer for the disposal of the asset less the base cost of the asset. The Capital Gains Tax inclusion rate for natural persons and special trusts is 40%.

German taxing authorities have adopted a contrasting stance on the taxation for assets held for investment purposes. The German Federal Central Tax Office or Bundeszentralamt für Steuern recognises crypto assets as private money for tax purposes and the profits are not considered capital in nature. Instead, they are considered private sales transactions (Cryptocurrencies in Your German Tax Return, 2021) and attract taxation from an Income Tax perspective. (Germany Crypto Tax Guide 2022 | Koinly, 2022). Further to this, Germany is the only jurisdiction that provides relief to taxpayers on profits derived from the sale of crypto assets with taxpayers who hold crypto assets for more than one year and then sell them are not liable to declare the profits (Cryptocurrencies in Your German Tax Return, 2021).

5.4.3 Crypto Assets held by the Corporate Taxpayers

Companies in the United Kingdom are subject to Corporation Tax on their income and gains. (CRYPTO41050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). When calculating their Corporate Tax, companies must take all exchange token transactions into account as they would with any other form of asset (CRYPTO41050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). The activity will be considered the sale of a capital asset and any profit made from it will be accounted for as a chargeable gain under Corporation Tax, but, if the activity involving the exchange token is not a trading activity it will not be accounted for under Corporation Tax. (CRYPTO41050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021).

In reference to the taxation rules utilised by Germany, crypto asset profits generated through a company are treated as income from business operations according to Section 15 EStG (German Income Tax Law) (Cryptocurrencies in Your German Tax Return, 2022) leading to transactions involving crypto assets being taxed on earnings from business. French taxing authorities account for the taxation on gains on digital assets that are disposed of and any unrealised gains are not taxed at the end of the year (O'Rorke & Lourimi, 2021). Profits from crypto assets are liable to tax under the general corporation tax regime for profits and losses and with unrealised profits or losses being neutralised from a tax perspective.

South African companies taxing implications for crypto assets are largely dependent on the intention of the company for holding crypto assets. South African Corporate Taxpayers will be subject to Income Tax implications if the company derives crypto asset tokens from mining or forking with the gains being subject to income tax, since they are derived from conducting a trade (Haupt, 2022; Chong & Moolman, 2021). The revenue generated from the sale of crypto assets during the operations of the company will be included in the Income for the company during that specific year of assessment. However, crypto assets held by Corporates for investment purposes will be subject to Capital Gains Tax on the profits derived from the sale of the asset for which any capital gains and losses have to be taken into account in calculating any aggregate gain or loss (Haupt, 2022).

Chapter 6: Conclusion

6.1 Introduction

As indicated in the introduction, the main research objective is to gain a comprehensive understanding of the commercial and economic substance of crypto assets and to provide insight to the tax treatment of crypto assets from a South African perspective.

The study comparatively explores three separate countries, namely the United Kingdom, France, and Germany, which have published frameworks with regard to the regulation and taxation of crypto assets and a comparison of the current regulatory tax framework adopted by South Africa taxing authorities was conducted.

6.2 Summary of Key Findings:

Key findings are summarised in Table 3.

Table 3: Key findings

Definition and Classification of Crypto Assets	The consensus on the definition of crypto assets is that they are "*a digital representations or tokens that are accessed, verified, transacted, and traded electronically by a community of users.*" (Intergovernmental Fintech Working Group, 2021) which is made possible by the use of cryptography but does not constitute a financial responsibility of any identifiable entity or a claim on its assets (Chimienti, 2019) Among the many uses of cryptographic assets include as a medium of trade, a way to gain access to blockchain-based products and services, and a way to fundraise for organisations. developing (Price Waterhouse Cooper, 2019).

	Existing terminology distinguishes three main categories of crypto–assets, namely Utility token, Security token and Asset-backed token (Ernst & Young, 2020) which possess distinctive attributes for each category of asset.
Regulatory Framework adopted by the United Kingdom, European Union, and South African regulatory authorities	The United Kingdom has developed a framework which considers the utilisation of the three main forms of crypto assets E–Money Tokens, Security Tokens and Utility Tokens which utilise the existing current legislation that is available (Financial Conduct Authority, 2018). E-money tokens are subject to and regulated under the Electronic Money Regulations 2011 whereas Security Tokens remain regulated under Regulated Authority Order 2001 (Financial Conduct Authority, 2018). The European Commission adopted the digital finance package titled *Markets in crypto assets* or MiCA. or the issuance and admission to trade crypto assets, which are currently uncontrolled in the form of white papers, these regulations impose minimal disclosure standards with the main focus applying to individuals working in the European Union who are engaged in issuing crypto assets or who offer services related to them. (Commission, 2020).

	Crypto assets remain largely unregulated in South Africa (Law Library of Congress, 2019) with the Intergovernmental Fintech Working Group publishing a position paper that outlines the regulatory strategy that will be used by the relevant and suitable regulatory bodies. The policy position took into account both current legal and regulatory frameworks and emerging regulations, such as the CoFI Bill and the 2020 Financial Markets Review (Intergovernmental Fintech Working Group, 2021).
Taxing Implications of crypto assets from a German, French, South African and United Kingdom perspective.	The United Kingdom has adopted the approach in which a taxpayer will be taxed in their personal capacity on any profits or losses that are incurred in the carrying on of a trade in crypto assets and in which Income Tax rules would take priority whereas crypto assets held for personal investment are subject to Capital Gain Tax (CRYPTO20050 - Cryptoassets Manual - HMRC internal manual - GOV.UK, 2021). The general income tax framework applies to French taxpayers, when the purchase and sale of digital assets is conducted on a professional basis. (O'Rorke & Lourimi, 2021). Occasional traders will be subject to capital gains realised on the sale of crypto assets and form part of an individual's private asset management.

	Germany recognises crypto assets as private assets that attract taxation from an Income Tax perspective. (Germany Crypto Tax Guide 2022 | Koinly, 2022). Profits from the sale of crypto assets are not considered as capital assets and are tax exempt after a holding period of one year. South Africa has adopted a stance by which the tax implications is dependent on the intention of the taxpayer. If the Taxpayer regularly sells crypto assets, the presumption is that the taxpayer's intention is to make a trading profit and, therefore taxable as a revenue profit (Haupt, 2022) whereas if the taxpayer neither sell, exchanges nor spends the crypto asset, the indication is that taxpayer is holding it as a store of value and therefore as a capital asset (Haupt, 2022) and subject to Capital Gains Tax.

South Africa's treatment of the taxation of crypto assets is closely aligned with that of the French and United Kingdom's taxing authorities. The outcome of the analysis indicates that the taxation of crypto assets held by taxpayers from trading purposes and investment purposes are accounted for in a similar manner from the perspective of the United Kingdom, French and South African taxing authorities.

Individual Taxpayers from a South African, French and United Kingdom perspective will account for crypto assets held for capital appreciation as capital assets and will subject profits on the disposal of the asset to Capital Gains Tax whereas crypto assets held for trade purposes on a regular basis will be treated as an inclusion in the taxpayer's income for the tax year of assessment and will be subject to income tax. However, South Africa's treatment is dissimilar to that of adopted by German taxing authorities. South African taxpayers are

required to account for crypto asset transactions based on their intention, whereas German taxpayers recognise crypto asset holdings as private assets. Nonetheless, the approach adopted from German Taxing authorities remains standalone and does not coincide with the taxing adoption utilised by the United Kingdom, France, and South Africa.

The approach adopted by SARS in regard to the utilisation of the current taxing regulations within the Income Tax Act suggest that South Africa's taxation treatment of crypto assets is in unison with the taxing regulations implemented by first world countries for which concrete taxing regulations have been developed and utilised.

6.3 Implications and recommendations

According to the research conducted, the following major issues have been reported that taxpayers may encounter when applying the tax treatment outlined above to transactions involving crypto assets. These concerns are listed below, along with suggestions about how to resolve them.

The Comprehensive Guide to Capital Gains Tax's (Issue 7) reveals that taxpayers are more inclined to hold volatile cryptocurrencies as revenue generating speculative assets (SARS 2018). This viewpoint can be applied to crypto assets, which are likely to be held as speculative assets due to their unpredictable pricing (Basson, 2020). The Comprehensive Guide to Capital Gains Tax indicates a position from SARS to view crypto assets as trading stock, rather than as a capital asset. Speculative assets would normally fall within the category of trading stock as specified under the Income Tax Act (Basson, 2020).

A taxpayer may have a dual intention in relation to holding of crypto assets, given the fact that it can be used as a means of exchange and speculative investment (Basson, 2020). This dual intention gives rise to whether the taxpayer identifies their crypto asset holdings as revenue or capital in nature. Analysis conducted by Ram (2018) suggests that the characteristics of crypto asset may lead to difficulty to apply the test of intention of the taxpayer with the associated crypto asset transaction. The analysis from Ram suggests that it is more accurate to determine the tax treatment of crypto assets with reference to the way the asset was acquired rather than the intention of acquiring the asset (Ram, 2018).

The associated difficulties in determining whether the taxpayer holds crypto assets for capital or revenue purposes can be mitigated by considering the timeframe of holding the asset (Basson, 2020). However, in reference to existing laws, guidance has been issued under S 9C

in which the revenue or the capital nature of the gains realised on the sale of equity shares was addressed (Basson, 2020). S 9C of the Income Tax Act classifies gains from the disposal of a qualifying share to be of capital in nature if the shares were held for a period of 3 years or greater on a continuous basis. Although not all crypto assets classes reflect the characteristics of equity shares, security tokens possess similar characteristics to that of equity shares and holders of security tokens may seek guidance as per S 9C.

It may be deemed appropriate that certain provisions should be introduced by the legislature in regard to crypto assets and to align S 9C with that of crypto assets. Furthermore, a need arises for the release of an interpretation note from SARS in regard to crypto assets. The interpretation note should clearly define what crypto assets are, the different categories of crypto assets (Assets Backed Tokens, Utility Tokens and Security Tokens) and the taxing implications of holding crypto assets for revenue and capital purposes. Such further guidance is justified considering the uncertainty that may arise because of the distinguishing characteristics of crypto assets.

In reference to the guidelines and recommendations as published in the Intergovernmental Fintech Working Group, respective stakeholders should look into the implementation of the framework recommended by the paper as crypto assets remain unregulated from a South African perspective. As per the proposals, focus should be placed on amendments to the Excon Regulations with respective stakeholders looking to develop and action their respective regulatory framework and oversight. The growing crypto market in South Africa suggests that a regulatory framework is needed urgently to ensure consumers are protected.

In order to encourage taxpayers to comply with tax and regulatory frameworks, tax breaks could be offered to those taxpayers (natural persons or companies) that are in compliance with the tax and regulatory requirements. The German Taxing authorities have taken the stance that proceeds from the disposal of crypto assets will not be subject to taxation if the proceeds are less that EUR 600. A similar stance should be considered by SARS to encourage taxpayers to disclose their crypto asset holdings.

The lack of regulation, interpretation notes, and guidance papers issued by relevant tax and governing authorities involving crypto asset transactions, leads to a major risk of non–compliance by the general tax base. The tax base may erode due to taxpayers involving themselves in criminal activities leading to tax evasion and money laundering activities. The lack of guidance may lead to taxpayer confusion on a large scale due to the arduous nature of

crypto assets in which taxpayers remain unaware of their obligation to disclose their crypto asset holdings. The research suggests that a major importance is the issuance of guidance by relevant South African authorities to protect consumers and users of crypto assets.

6.4 Contribution and areas of future research

This research contributes to the limited body of knowledge regarding the taxation of crypto assets from a South African perspective. More specifically, the research investigates the commercial and economic substance of crypto assets and uses this understanding as a guide on how crypto assets should be taxed from a South African perspective. Further to this, the research analyses the separate classes of crypto assets available to taxpayers and conducts a comparative analysis looking at the regulatory and taxing regulations adopted by the United Kingdom, Germany, and France. The analysis conducted establishes that the tax treatment adopted by South Africa is aligned with that of the United Kingdom and France, however, South Africa lacks specific regulatory framework dealing with crypto assets when compared with jurisdictions such as the United Kingdom and the European Union.

References

- Accaglobal.com. 2022. Barter | ACCA Global. [online] Available at: https://www.accaglobal.com/uk/en/business-finance/types-finance/bartering.html> [Accessed 19 May 2022].
- Akins, B.W., Chapman, J.L. and Gordon, J.M. (2014), "A whole new world: income tax considerations of the Bitcoin economy", *Pittsburgh Tax Review*, Vol. 12 No. 1, pp. 25-56, available at: https://doi.org/10.5195/taxreview.2014.32 (accessed 25 April 2022).
- Allen, J., 2022. Towards a European Governance Framework for Cryptoassets. [online] Suerf.org. Available at: https://www.suerf.org/docx/f_ca91c5464e73d3066825362c3093a45f_7839_suerf.pdf [Accessed 10 April 2022].
- Arfwidsson, A. and Kjærsgaard, L., 2019. Taxation of Cryptocurrencies from the Danish and Swedish Perspectives. *Intertax,* [online] 47(Issue 6/7), pp.620-634. Available at: https://kluwerlawonline.com/journalarticle/Intertax/47.6/TAXI2019061
- Assaid, Z., 2021. Taxation of bitcoin and cryptocurrencies in France. [online] Blockpit. Available at: https://blockpit.io/en/blog/taxes-on-cryptocurrency-in-france/ [Accessed 8 April 2022].
- Assets.publishing.service.gov.uk. 2018. [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/752070/cryptoassets_taskforce_final_report_final_web.pdf [Accessed 26 May 2022].
- Baur, D., 2022. Cryptographic assets. [online] Available at: https://www.pwc.ch/en/insights/disclose/29/cryptographic-assets.html [Accessed 17 May 2022].
- Barsan, I., 2017. 'Legal Challenges of Initial Coin Offerings (ICO)', Colloque.
- Barsan, I., 2019. Regulating the Crypto World New Developments from France, s.l.: University Paris-Est Créteil.
- Bashynska, I., Malanchuk, M., Zhurave, O., Olinichenko, K., 2019. 'Smart Solutions: risk Management of Crypto-Assets and Blockchain Technologies', *International Journal of Civil Engineering and Technology.* No 10. pp. 1121-1131.

- Basson, R., 2020, 'An analysis of issues relating to the taxation of cryptocurrencies as financial instruments', *Journal of Economic and Financial Sciences* 13(1), a487. https://doi.org/10.4102/jef.v13i1.487 (https://doi.org/10.4102/jef.v13i1.487)
- Berger, L., 2016. 'Bitcoin exchange transactions: Income tax implications to consider within the South African environment', LLM Thesis, North - West University.
- Birch, D., Brown, R., Salome P., 2015. '*Towards ambient accountability in financial services: Shared ledgers, translucent transactions and the technological legacy of the great financial crisis.',* Henry Stewart Publications.
- Blandin, A., 2019. *Global Cryptoasset Regulatory Landscape Study*, Cambridge: University of Cambridge Faculty of Law Legal Studies.
- Bočánek, M., 2021. 'First Draft of Crypto – Asset's regulations (MiCA) with the European Union and Potential Implementation', Gdansk: University of Gdansk.
- Boehm, F., Pesch, P., 2014. *'Bitcoin: A First Legal Analysis- with reference to German and US-American law'*, Munster: Institute for Information, Telecommunication, and Media Law, University of Münster.
- Britton, D., 2022. How cryptoassets are treated for business tax purposes. [online] Bdo.co.uk. Available at: https://www.bdo.co.uk/en-gb/insights/tax/corporate-tax/how-cryptoassets-are-treated-for-business-tax-purposes [Accessed 30 May 2022]
- Broumas, A., 2021. Impact of the MiCA proposal on the taxation of crypto-assets within the EU. [Online] Available at: <https://www.internationaltaxreview.com/article/b1v26088yfnd4t/impact-of-the-mica-proposal-on-the-taxation-of-crypto-assets-within-the-eu> [Accessed 10 November 2021].
- Bullmann, D., Klemm, J., Pinna, J., 2019. '*In search for stability in crypto-assets: are stablecoins the solution?'*, Frankfurt: European Central Bank.
- BusinessLIVE. 2022. Research reveals what South Africans think about cryptocurrency. [online] Available at: https://www.businesslive.co.za/redzone/news-insights/2021-09-21-native-research-reveals-what-south-africans-think-about-cryptocurrency/ [Accessed 20 March 2022].
- Business Insider SA., 2021. 'SARS is cracking down on cryptocurrency owners. Here's what you need to know'. [Online] Available at: https://www.businessinsider.co.za/sars-and-tax-on-cryptocurrencies-like-bitcoin-2021-3 [Accessed 21 04 2021].

- Chimienti, M., Kochanska, U., Pinna, A., 2019. *'Understanding the crypto-asset phenomenon, its risks and measurement issues'*, ECB Economic Bulletin.
- Chimienti, M., Kochanska, U. and Pinna, A., 2022. Understanding the crypto-asset phenomenon, its risks and measurement issues. [online] European Central Bank. Available at: https://www.ecb.europa.eu/pub/economic-bulletin/articles/2019/html/ecb.ebart201905_03~c83aeaa44c.en.html [Accessed 25 May 2022].
- Chong, J. and Moolman, L., 2022. No Doge-ing the tax bill on cryptocurrency transactions. [online] Webber Wentzel. Available at: https://www.webberwentzel.com/News/Pages/no-doge-ing-the-tax-bill-on-cryptocurrency-transactions.aspx [Accessed 25 May 2022].
- Cliffordchance.com. 2022. Security Token Offerings – A European Perspective On Regulation. [online] Available at: https://www.cliffordchance.com/content/dam/cliffordchance/briefings/2020/10/security-token-offerings-a-european-perspective-on-regulation.pdf [Accessed 22 May 2022].
- Coelho, A.S., 2017, *'The tax and exchange control consequences of virtual currency transactions in South Africa'*, Master's thesis, Department of Commercial Law, University of Cape Town, Cape Town.
- Creswell, J.W. 2014, *Research Design*, SAGE, London.
- Croome, B., Oguttu, A., Muller, E., Legwaila, T., Kolitz, M., Williams, RC., Louw, C., 2015c. *Tax Law: An Introduction*. Johannesburg: Juta.
- Dąbrowska, M., 2022. Crypto regulation in Germany - state of play | Matczuk Wieczorek i Wspólnicy Kancelaria Adwokatów i Radców Prawnych. [online] Mwwlaw.pl. Available at: <https://www.mwwlaw.pl/pl/blog/crypto-regulation-in-germany---state-of-play> [Accessed 10 April 2022].
- Deloitte, 2020. Are token assets the securities of tomorrow?. [Online] Available at: < https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/technology/lu-token-assets-securities-tomorrow.pdf > [Accessed 07 October 2021].
- Dovaston, J., 2022. Accounting for crypto-assets. [online] Accountantsdaily.com.au. Available at: https://www.accountantsdaily.com.au/columns/12403-accounting-for-crypto-assets [Accessed 21 May 2022].

- Fairbairn, N., 2021. 'SARS casts its non-compliance net wide'. [Online] Available at: <https://www.werksmans.com/legal-updates-and-opinions/sars-casts-its-non-compliance-net-wide/ > [Accessed 11 May 2021].
- Farell, R., 2015. '*An Analysis of the Cryptocurrency Industry'*, Pennsylvania: University of Pennsylvania.
- Financial Conduct Authority., 2016. 'Financial Conduct Authority Handbook'. [Online] Available at: <https://www.handbook.fca.org.uk/handbook/glossary/G1117.html?date=2016-03-21 > [Accessed 27 October 2021].
- G7 Working Group on Stablecoins., 2019. 'Investigating the impact of global stablecoins'. [Online] Available at: https://amlbot.com/wp-content/uploads/2020/05/IPOL_STU2020648779_EN.pdf [Accessed 03 October 2021].
- Gamble, C. (2017), "The legality and regulatory challenges of decentralised crypto-currency: a western perspective", *International Trade and Business Law Review*, Vol. 20,pp.346-361,available at: http://heinonline.org/HOL/Page?handle=hein.journals/itbla20&collection=journals&index=& id=358 (accessed 25 April 2022).
- Garcia-Teruel, R. and Simón-Moreno, H., 2021. The digital tokenization of property rights. A comparative perspective. *Computer Law & Security Review*, [online] 41, p.105543. Available at: http://housing.urv.cat/wp-content/uploads/2021/05/WP-1-2021-Digital-tokenization-property-rights.pdf [Accessed 6 May 2022].
- Hacker, P., Thomale, C., 2017. '*Crypto-Securities Regulation: ICOs, Token Sales and Cryptocurrencies',* Working Report.
- Hampton, V., 2021. 'The Popularity of Cryptocurrencies in South Africa'. [Online] Available at: https://www.sapeople.com/2021/02/03/the-popularity-of-cryptocurrencies-in-south-africa/ [Accessed 22 07 2021].
- Hargrave, J., Sahdev, N. and Feldmeier, O., 2018. *How Value is Created in Tokenized Assets*. SSRN Electronic Journal, [online] Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3146191 [Accessed 26 May 2022]
- Haupt, P., Haupt, E. and Haupt, K., 2022. *Notes on South African income tax, 2022*. Cape Town: Hedron Publishers.

- Herkstroter, C., 2022. Crypto Assets: Germany introduces new regulatory regime. [online] Regulation Tomorrow. Available at: https://www.regulationtomorrow.com/de/crypto-assets-germany-introduces-new-regulatory-regime/ [Accessed 11 April 2022].
- Her Majesty's Treasury., n.d. About Us. [Online] Available at: https://www.gov.uk/government/organisations/hm-treasury/about [Accessed 26 October 2021].
- Hileman, G., Rauch, M. 2017. 2017 Global Cryptocurrency Benchmarking Study Cambridge, UK: Cambridge University. Available at: https://www.jbs.cam.ac.uk/.../2017-global-cryptocurrency-benchmarking-study.pdf {Accessed 18 April 2022}.
- Houben, R, Snyers, A., 2020. *'Crypto - Assets, Key developments and regulatory',* Luxembourg: Policy Department for Economic, Scientific and Quality of Life Policies.
- Iansiti, M., Lakhani, K., 2017. 'The truth about blockchain'. [Online] Available at: https://d1wqtxts1xzle7.cloudfront.net/53865594/R1701J-PDF-ENG-with-cover-page-v2.pdf?Expires=1632688415&Signature=E-kDB6Luvb9PN0XzKVdWumslFyKNcmUdNF-deReWrs1oHSLFMTPGcgMCjj~Wd3Jgzfz7nh8dunvze-uLiCb~vxKTo~n4062VSQ3A70lBk42iRszAuUXyvBYZLoUft5indiEOpEf-KMBOp [Accessed 26 September 2021].
- Ifrs.org. 2022. [online] Available at: https://www.ifrs.org/content/dam/ifrs/meetings/2020/december/asaf/02a-asaf-paper-on-efrag-discussion-paper-accounting-for-crypto-assets-liabilities.pdf [Accessed 25 May 2022].
- International Monetary Fund. 2003. External Debt Statistics: Guide for Compilers and Users. [online] Available at: https://www.imf.org/external/pubs/ft/eds/Eng/Guide/file1.pdf [Accessed 26 May 2022].
- Kelly, J., 2019. Stuff Elon says, (inevitable) bitcoin edition. [online] Ft.com. Available at:https://www.ft.com/content/fc0c1288-3c50-3d67-a86d-79d38e3822b4 [Accessed 16 April 2022].

- Koinly.io. 2022. Germany Crypto Tax Guide 2022 | Koinly. [online] Available at: https://koinly.io/guides/crypto-tax-germany/ [Accessed 24 April 2022].
- Kumar, R., 2014. *Strategies of Banks and Other Financial Institutions* | ScienceDirect. [online] Sciencedirect.com. Available at: https://www.sciencedirect.com/book/9780124169975/strategies-of-banks-and-other-financial-institutions [Accessed 26 May 2022].
- Lambert, T., Liebau, D. and Roosenboom, P., 2021. Security token offerings. Small Business Economics, [online] Available at: https://link.springer.com/article/10.1007/s11187-021-00539-9 [Accessed 25 May 2022].
- Lausen, J., n.d. '*regulating initial coin offerings? A taxonomy of crypto-assets'*, Frankfurt: Goethe University.
- Lewis, A., 2015. 'A gentle introduction to digital tokens'. [Online] Available at: https://bitsonblocks.net/2015/09/28/gentle-introduction-digital-tokens/ [Accessed 07 October 2021].
- Lobban, T., 2018. *'The Implications of Cryptocurrency as a Financial Instrument in the Income Tax Act 58 of 1962 from a Commercial Perspective'*, Masters thesis, School of Law, Johannesburg: University of Johannesburg.
- March OECD (2020), Taxing Virtual Currencies: An Overview of Tax Treatments And Emerging Tax Policy Issues, OECD, Paris. Available at: www.oecd.org/tax/tax-policy/taxing-virtual-currencies-an-overview-of-tax-treatments-and-emergingtax-policy issues.htm2022]
- May, B., 2022. Crypto assets | France anticipation of the MiCA regulation. [online] PAYMENT.TECHNOLOGY.LAW. Available at: https://paytechlaw.com/en/crypto-assets-france-anticipation-micar/ [Accessed 10 April 2022].
- Moosa F., 2019. Cryptocurrencies: Do they qualify as "gross income"?, *Journal for Juridical Science,* Vol. 44, No. 1, pp. 10 - 34.
- Mukumba, T., 2021. Crypto assets: Current and future tax and exchange control considerations. [Online] Available at: https://www.cliffedekkerhofmeyr.com/en/news/publications/2021/Tax/tax-alert-16-september-Crypto-assets-Current-and-future-tax-and-exchange-control-considerations.html [Accessed 8 May 2021].

- Nägele, T., 2022. *MiCa — Markets In Crypto-Assets Regulation And The DLT Pilot Regime — What Impact Might These Proposed EU Regulations Have On Liechtenstein Fin Tech - European Union.* [online] Mondaq.com. Available at: https://www.mondaq.com/fin-tech/1014530/mica-markets-in-crypto-assets-regulation-and-the-dlt-pilot-regime-what-impact-might-these-proposed-eu-regulations-have-on-liechtenstein-and-the-tvtg-aka-blockchain-act [Accessed 29 May 2022].
- Nakamoto, S., 2008. Bitcoin: A Peer-to-Peer Electronic Cash System. [Online] Available at: https://bitcoin.org/bitcoin.pdf [Accessed 03 October 2021].
- Natarajan, H., Solvej, K., Gradstein, H., 2017. 'Distributed Ledger Technology and Blockchain. FinTech Note'. [Online] Available at: https://openknowledge.worldbank.org/bitstream/handle/10986/29053/WP-PUBLIC-Distributed-Ledger-Technology-and-Blockchain-Fintech-Notes.pdf?sequence=5&isAllowed=y [Accessed 27 September 2021].
- Nowosenetz, T., 2022. Research gives some idea about how much South Africa's cryptocurrency owners have. [online] Businesstech.co.za. Available at: https://businesstech.co.za/news/banking/521294/research-gives-some-idea-about-how-much-south-africas-cryptocurrency-owners-have/ [Accessed 20 March 2022].
- Omar, M., 2021. *A synopsis of the regulatory working group's paper on crypto assets*, s.l.: South African Institute of Professional Accountants.
- Ooi, V., 2021. '*The taxation of cryptocurrency gains, Singapore'*: Singapore Management University.
- Pelz, C., 2022. Crypto Asset Transfer Regulation: Increasing regulation of crypto assets - Noerr. [online] Noerr.com. Available at: https://www.noerr.com/en/newsroom/news/crypto-asset-transfer-regulation-increasing-regulation-of-crypto-assets [Accessed 10 April 2022].
- Pilkington, M., 2016. '*Blockchain Technology: Principles and Application'*Edward Elgar Publishing.
- Pienaar, S. and Steyn, T., 2010. South African Income Tax Implications for Income Earned In Virtual Worlds. *Journal of Applied Business Research (JABR),* 26(2).
- PriceWaterhouseCoopers 2019. 'Cryptographic assets and related transactions: accounting considerations under IFRS. [Online] Available at: https://www.pwc.com/gx/en/audit-services/ifrs/publications/ifrs-16/cryptographic-

assets-related-transactions-accounting-considerations-ifrs-pwc-in-depth.pdf [Accessed 04 October 2021].

- Ram, A., Maroun, W. and Garnett, R. (2016), "Accounting for the Bitcoin: accountability, neoliberalism and a correspondence analysis", *Meditari Accountancy Research*, Vol. 24 No. 1, pp. 2-35, available at: http://dx.doi.org/10.1108/MEDAR-07-2015-0035 (accessed 28 April 2022).
- Reynolds, P. and Irwin, A.S.M. (2017), "Tracking digital footprints: anonymity within the bitcoin system", *Journal of Money Laundering Control*, Vol. 20 No. 2, pp. 172-189, available at: https:// doi.org/10.1108/JMLC-07-2016-0027 (accessed 28 April 2022)
- Rohr, J., Wright, A., 2017. *'Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets'*, Working Paper.
- Salami, D., n.d. '*Cryptoassets Regulation in Africa: RegTech and SupTech Considerations*,' London: University of East London.
- Schar, F., Berentsen, A., 2020. '*Bitcoin, Blockchain, and Cryptoassets: A Comprehensive Introduction*. Massachusetts: The MIT Press.
- Segal, M. (2019), "Key audit matters: insight from audit experts", *Meditari Accountancy Research*, Vol. 27 No. 3, pp. 472-494. https://doi.org/10.1108/MEDAR-06-2018-0355
- Scheepers, J., 2019. '*Analysis of Cryptocurrency verification challenges faced by the South African Revenue Services and Tax authorities in other BRICS countries and whether SARS' powers to gather information relating to cryptocurrency transactions are on par with those of other BRICS countries'*, Cape Town: University of Cape Town.
- Schiavone, G., n.d. 'UK tax treatment of cryptoassets: A coherent tax analysis when investing, trading and disposing of in cryptoassets'. *Diritto tributario internazionale e dell'UE,* pp. 490 - 496.
- Singh, H., 2019. *'Show Me the Money: A discussion of the Cryptocurrency market and its potential regulation in South Africa'*, Masters thesis, School of Law, Durban: University of Kwa - Zulu Natal.
- Stiglingh, M., Koekemoer, AD., van Zyl, L., Wilcocks, JS., de Swart, RD., 2016e. Silke: South African Income Tax. In: *Silke: South African Income Tax*. Johannesburg: Lexis Nexis.

- Stiglingh, M., Koekemoer, AD., van Zyl, L., Wilcocks, JS., de Swart, RD., 2016f. Silke: South African Income Tax. In: *Silke: South African Income Tax*. Johannesburg: Lexis Nexis.
- Stiglingh, M., Koekemoer, AD., van Zyl, L., Wilcocks, JS., de Swart, RD., 2021. *SILKE: South African Income Tax 2021.* 23 ed. Johannesburg: LexisNexis.
- The South African Revenue Service., 2021. FAQs: Crypto assets. [Online] Available at: https://www.sars.gov.za/wp-content/uploads/Docs/Legal/Crypto-FAQs-reviewed-23-June-2021.pdf [Accessed 27 June 2021].
- Sars.gov.za. 2022. Comprehensive Guide to Capital Gains Tax. [online] Available at: <https://www.sars.gov.za/wp-content/uploads/Ops/Guides/LAPD-CGT-G01-Comprehensive-Guide-to-Capital-Gains-Tax.pdf> [Accessed 12 May 2022].
- Vermaak, W., 2021. 'MiCA: A Guide to the EU's Proposed Markets in Crypto-Assets Regulation'. [Online] Available at: https://www.sygna.io/blog/what-is-mica-markets-in-crypto-assets-eu-regulation-guide/ [Accessed 14 November 2021].
- Warneke, D., 2021. Crypto Assets: How you are taxed. [online] Bdo.co.za. Available at: https://www.bdo.co.za/en-za/insights/2021/tax/crypto-assets-how-you-are-taxed [Accessed 18 May 2022].
- Wicht, M. S., 2016. *The Tax Implications of Bitcoin in South Africa*, Pretoria: University of Pretoria
- Williams, R., 2012. *Introduction to trading in the financial markets*. Burlington, MA: Academic Press.
- Zetzsche, D., Arner, D., Annunziata, F., Buckley, R., 2020. *'The Markets in Crypto-Assets Regulation (MICA) and the EU Digital Finance Strategy*', Luxembourg: University of Luxembourg.

Court Cases

- CIR v Butcher Bros (Pty) Ltd 1945 AD 301 (n.d.).
- ITC 1185 (1972) 35 SATC 122 (1972).
- John Bell & Co (Pty) Ltd v SIR 1976 4 SA 415 (A) and CSARS v Volkswagen of South Africa (Pty) Ltd 2001 (2) SA 42 (SCA). (n.d.).
- WH Lategan v CIR 1926 CPD 203 209 (1926).
- SARS v Cape Consumers (Pty) Ltd (61 SATC 91.)

- CIR vs Visser (CIR v 1937 TPD 77, 8 SATC 271)
- Geldenhuys v CIR (1947 (3) SA 256 (C), 14 SATC 419)
- CIR v People's Stores (Walvis Bay) (Pty) Ltd 1990 (2) SA 353 (A), 52 SATC 9 at 21

Government Publications

- European Central Bank, 2012. "Virtual currency schemes", European Central Bank, available at: www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf (accessed 9 April 2022).
- European Central Bank, 2015. "Virtual currency schemes – a further analysis", European Central Bank, available at: www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemesen.pdf (accessed 17 December 2015).
- European Central Bank., 2019. 'Crypto-Assets: Implications for financial stability, monetary policy, and payments and market infrastructures', European Central Bank.
- European Securities and Markets Authority., 2019. 'Advice - Initial Coin Offerings and Crypto-Assets', European Securities and Markets Authority.
- Financial Conduct Authority of the United Kingdom., 2019.' Guidance on Cryptoassets, London': Financial Conduct Authority of the United Kingdom.
- Financial Stability Board 2018, Crypto-asset markets - Potential channels for future financial stability implications, Financial Stability Board.
- Her Majesty's Treasury., 2021. 'UK regulatory approach to cryptoassets and stablecoins': Consultation and call for evidence.
- Intergovernmental Fintech Working Group., 2021. Position paper on crypto assets, Johannesburg: Intergovernmental Fintech Working Group.
- South African National Treasury., 2021. Taxation Laws Amendment Act 23 of 2020 Cape Town: National Treasury.
- South African Revenue Service. 2022. Crypto Assets & Tax | South African Revenue Service. [online] Available at: https://www.sars.gov.za/individuals/crypto-assets-tax/#:~:text=A%20crypto%20asset%20is%20a,techniques%20in%20the%20underlying%20technology. [Accessed 24 April 2022].
- The Law Library of Congress., 2019. 'Regulatory Approaches to Cryptoassets in Selected Jurisdictions', Washington DC: The Law Library of Congress.

- The Standing Committee on Financial Conduct Authority., 2018. ‘Cryptoassets Taskforce: final report’, Financial Conduct Authority, Bank of England, Her Majesty's Treasury.
- The South African Reserve Bank., 2014. ‘Position Paper on Virtual Currencies’, Pretoria: The South African Reserve Bank.
- South African National Treasury., 2012. Explanatory Memorandum on the Taxation Laws Amendment Bill, Johannesburg: National Treasury.

Government Publications: United Kingdom Government

- Gov.uk. 2021. Income Tax. [online] Available at: <https://www.gov.uk/income-tax> [Accessed 2 November 2021].
- Gov.uk. 2021. CRYPTO21100 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto21100> [Accessed 2 November 2021].
- Gov.uk. 2021. CRYPTO21100 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto21100> [Accessed 2 November 2021].
- Gov.uk. 2021. EIM11900 - Employment Income Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/employment-income-manual/eim11900> [Accessed 2 November 2021].
- Gov.uk. 2021. CRYPTO21150 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto21150> [Accessed 2 November 2021].
- Gov.uk. 2021. CRYPTO20250 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto20250> [Accessed 2 November 2021].
- Gov.uk. 2021. CRYPTO22050 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto22050> [Accessed 2 November 2021].
- Gov.uk. 2021. CG10240 - Capital Gains Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/capital-gains-manual/cg10240> [Accessed 3 November 2021].

- Gov.uk. 2021. CG14500 - Capital Gains Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/capital-gains-manual/cg14500> [Accessed 3 November 2021].
- Gov.uk. 2021. CG14500 - Capital Gains Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/capital-gains-manual/cg14500> [Accessed 3 November 2021].
- Gov.uk. 2021. CRYPTO22150 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto22150> [Accessed 3 November 2021].
- Gov.uk. 2021. CRYPTO23000 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto23000> [Accessed 3 November 2021].
- Gov.uk. 2021. CRYPTO41050 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto41050> [Accessed 3 November 2021].
- Gov.uk. 2021. CRYPTO41150 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto41150> [Accessed 3 November 2021].
- Gov.uk. 2021. CRYPTO41200 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto41200> [Accessed 3 November 2021].
- Gov.uk. 2021. CIRD10101 - Corporate Intangibles Research and Development Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/corporate-intangibles-research-and-development-manual/cird10101> [Accessed 7 November 2021]
- Gov.uk. 2021. CRYPTO41250 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto41250> [Accessed 7 November 2021].
- Gov.uk. 2021. CRYPTO41300 - Cryptoassets Manual - HMRC internal manual - GOV.UK. [online] Available at: <https://www.gov.uk/hmrc-internal-manuals/cryptoassets-manual/crypto41300> [Accessed 7 November 2021].

- Gov.uk. 2022. Government sets out plan to make UK a global cryptoasset technology hub. [online] Available at: <https://www.gov.uk/government/news/government-sets-out-plan-to-make-uk-a-global-cryptoasset-technology-hub> [Accessed 7 April 2022].