

S C H O O L O F

ACCOUNTANCY

University of the Witwatersrand, Johannesburg

**THE TAX IMPLICATIONS OF CRYPTO ASSETS IN
SOUTH AFRICA**

Riya Mistry

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

Johannesburg, 2023

ABSTRACT

The primary objective of this research report is to examine the current South African legislation and guidance on the taxation of crypto asset transactions. More specifically, this research report will focus on identifying any inadequacies in the legislation and guidance issued by the South African Revenue Service (SARS) and provide suggested solutions to these inadequacies.

In 2018, SARS issued a media release (South African Revenue Service [SARS], 2018) to clarify its stance on the tax treatment of crypto assets and issued a list of frequently asked questions on crypto assets which was revised in 2021 (SARS, 2021a). More recently, The Commissioner of SARS, Edward Kieswetter, confirmed that any undisclosed holdings of crypto assets would be a prioritised area of focus for the tax revenue authority in the 2021 year of assessment (Tax Consulting South Africa, 2021). This indicated that SARS would be focusing more on the taxation and verification of crypto asset transactions in the near future.

In August 2021, SARS provided further guidance on the taxation of crypto assets on their website. According to this guidance, normal income tax rules apply to crypto assets, and affected taxpayers must declare profits and losses from crypto assets as part of their taxable income. Taxpayers are further required to declare all taxable income related to crypto assets during the tax year in which it was earned or accrued; if not, the taxpayer will be subject to penalties and interest (SARS, 2021b).

The findings of this research report are that the acquisition, exchange, and disposal of crypto assets represent separate transactions with clearly identifiable income tax consequences in South Africa. The income tax consequences are dependent on whether the accrual and the amount are of a capital or revenue nature.

This research report seeks to identify inadequacies in the legislation and guidance issued by SARS on the taxation of crypto assets. This will be achieved by conducting a comparative analysis between the legislation and guidance issued by the Australian Taxation Office (ATO) in Australia, the South African Revenue Service (SARS) in South

Africa, and Internal Revenue Service (IRS) in the United States of America. Recommendations will be made to resolve the inadequacies identified.

Keywords: Barter transactions, Bitcoin, blockchain, crypto assets, cryptocurrency, digital currency, fiat currency, tax evasion, tokens, virtual currency

DECLARATION

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

Riya Mistry

10 January 2023

To my husband Kavish, daughter Kiara, and Son Kairav

with sincere thanks

for their love and encouragement

during the writing of this research report

ACKNOWLEDGMENTS

Firstly, I would like to thank God who has provided me with the necessary motivation, strength, and wisdom to complete this research report.

I would like to thank my supervisor, Prof. Maeve Kolitz for her invaluable supervision, support, and expert guidance in writing this research report.

I would also like to thank my parents, without whom this would have not been possible. Thank you for all your prayers. My appreciation also goes out to the rest of my family and friends for their encouragement all through my studies.

Finally, I would like to thank my husband for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this report.

CONTENTS

ABSTRACT	ii
DECLARATION	iv
ACKNOWLEDGMENTS.....	vi
CONTENTS	vii
CHAPTER 1: INTRODUCTION	1
1.1. Background to crypto assets.....	1
1.2. Overview of the crypto asset system	2
1.1.1. Blockchain technology and crypto asset	3
1.1.2. How does the mining of crypto assets work?	4
1.1.3. How does a crypto asset exchange work?	5
1.3. Crypto assets in South Africa	6
1.3.1 The regulation of crypto assets in South Africa	6
1.3.2 The taxation of crypto assets in South Africa.....	8
1.4. The rationale for the research report	10
1.5. Research problem and sub-questions	12
1.5.1. Research problem	12
1.5.2. Sub-questions.....	12
1.6 Research methodology	13
CHAPTER 2: TAXATION OF CRYPTO ASSETS IN SOUTH AFRICA	15
2.1. Introduction	15
2.2. Crypto asset transactions.....	15
2.3. Crypto assets held as trading stock.....	16
2.3.1 Gross income definition.....	16
2.3.1.1 Total amount in cash or otherwise	17
2.3.1.2 Received by or accrued to	19
2.3.1.3 Not a receipt or accrual of capital nature	21
2.3.2 General deduction formula - Section 11(a) and Section 23 (g).....	24

2.3.2.1	Carrying on a trade	25
2.3.2.2	Expenditure and losses	26
2.3.2.3	Actually incurred	26
2.3.2.4	In the production of income	27
2.3.2.5	Not of a capital nature	28
2.3.3	Section 22: Amounts to be considered in respect of the value of trading stock.	29
2.3.4	Crypto assets acquired through mining	31
2.3.4.1	Taxability of profits and losses of crypto assets acquired through mining	31
2.4.	Crypto assets held as a capital asset.....	32
2.4.1	Asset	33
2.4.2	Actual or deemed disposal.....	34
2.4.3	The base cost of the asset	34
2.3.4.2	Crypto assets purchased with fiat currency	34
2.3.4.3	Crypto assets exchanged for goods in a barter transaction	35
2.3.4.4	Crypto assets exchanged for services in a barter transaction	35
2.3.4.5	Crypto asset represents ‘identical assets’	35
2.4.4	Proceeds from the disposal of the asset	37
2.5.	Conclusion	37
CHAPTER 3: TAXATION OF CRYPTO ASSETS IN CERTAIN COUNTRIES IN COMPARISON TO THE TAX TREATMENT IN SOUTH AFRICA.....		39
3.1.	Introduction	39
3.2.	Guidance issued by the Australian Taxation Office on the taxation of crypto assets in Australia	40
3.2.1.	Income and Capital Gains Taxes	41
3.3.	Guidance issued by the Internal Revenue Service on the taxation of crypto assets in the United States of America	44
3.3.1.	Income and Capital Gains Taxes	45
3.3.1.1.	Determining the recognized portion of the gain or loss	46
3.3.1.2.	Characterisation of the recognized gain or loss as ordinary, capital, or property in terms of s 1231 of the Internal Revenue Code of 1986	47

3.4. Crypto asset transaction 1: Mining of crypto assets	47
3.4.1. Australia.....	47
3.4.2. The United States of America	49
3.5. Crypto asset transaction 2: Crypto assets exchanged for fiat currency	50
3.5.1. Australia.....	50
3.5.2. The United States of America	51
3.6. Crypto asset transaction 3: Crypto assets exchanged for crypto assets and crypto assets exchanged for goods and services.....	52
3.6.1. Australia.....	52
3.6.2. The United States of America	53
3.7. Conclusion	54
CHAPTER 4: RECOMMENDATIONS FOR THE TAXATION OF CRYPTO ASSET TRANSACTIONS IN SOUTH AFRICA.....	58
4.1. Introduction	58
4.2. Inadequacies identified in the South African taxation system in relation to crypto asset transactions	58
4.2.1. Valuation of crypto assets.....	58
4.2.2. Guidance on other crypto asset transactions.....	59
4.3. Key recommendation for the taxation of crypto asset transactions in South Africa	61
4.3.1. Additional guidance to be issued by SARS.....	61
CHAPTER 5: CONCLUSION	63
REFERENCES	66
Books	66
Case Laws: South African Cases.....	66
Journal Articles.....	67
Government Reports/Publications	68
Legislation: Australia	70
Legal Notices and Legislation: United States of America	70
Legal Notices and Legislation: South Africa	71

Research Reports	71
Websites.....	72

CHAPTER 1: INTRODUCTION

1.1. Background to crypto assets

The Davis Tax Committee (Davis Tax Committee, 2015a:1) stated in a report that:

‘the digital economy is the result of a transformative process brought by information and communication technology (ICT), which has made technologies cheaper, more powerful, and widely standardised, improving business processes and bolstering innovation across all sectors of the economy.’

As the digital economy is becoming the economy itself, it would be difficult if not impossible to separate it from the rest of the economy for tax purposes (Davis Tax Committee, 2015a:1). According to Shovkhalov and Idrisov (2021:2), information has evolved into more than just a repository of knowledge; it has advanced into a commodity that can be traded in the economic market. Shovkhalov and Idrisov (2021:2) have further stated that information technology has permeated all human aspects of business activity.

According to Ritter (1995:134-135), fiat currency is money comprising coins and paper notes that a national government issues and is circulated in the economy as legal tender, although no physical commodity backs it. Fiat currency can be legally offered in payment of a service rendered, and a service provider is obliged to accept it in settlement of the service (Hamukuaya, 2021:2).

A crypto asset¹ relates to a virtual currency, which is both protected by cryptography and exchangeable for fiat currency (Financial Action Task Force, 2014:5). The Financial Action Task Force (2014:5) defines virtual currency as:

‘a digital representation of value that can be digitally traded and functions as (1) a medium of exchange; and/or (2) a unit of account; and/or (3) a store of value, but does not have legal tender status (i.e., when tendered to a creditor, is a valid and legal offer of payment) in any jurisdiction.’

¹ In 2018, the definition of ‘financial instrument’ in s 1(1) of the Income Tax Act 58 of 1962 was amended by the Taxation Laws Amendment Act 23 of 2018 to include ‘any cryptocurrency’. The definition of ‘financial instrument’ in s1(1) was further amended in 2021: according to the *Explanatory Memorandum on the Taxation Laws Amendment Bill* (2018:42), the word ‘cryptocurrency’ was replaced with ‘crypto asset’. The terms virtual currency, cryptocurrency, digital currency, and crypto asset are referred to interchangeably in the economy. In this research report, the term crypto asset will be used to refer to cryptocurrency, digital asset and virtual currency to ensure compliance with the definition of a ‘financial instrument’ in s 1(1) of the Income Tax Act 58 of 1962.

Virtual currencies including crypto assets are presently unregulated in South Africa and are not an official legal tender issued under the South African Reserve Bank Act 90 of 1989, unlike fiat currency which is issued and backed by the South African Reserve Bank (SARB) (Intergovernmental Fintech Working Group, 2021a:3). Similar to fiat currency, virtual currencies are intended to be used as media of exchange that enable two parties to trade or transact (Texas State Securities Board, 2021).

Bitcoin was launched in 2009 and is the first decentralised convertible virtual currency and the first crypto asset (Financial Action Task Force, 2014:5). Bitcoin was the solution to the double-spending problem as announced by Satoshi Nakamoto (a pseudonym) in 2008 (Nakamoto, 2008). The double-spending problem is a phenomenon whereby a single unit of currency is spent simultaneously more than once, which creates a disparity between the spending record and the amount of that currency available (Freemen, 2020b).

Crypto assets and virtual currencies have become increasingly popular in recent years (Little, 2021). This is due to the faults in the current fiat currency payment system which are high transaction costs, delays in the flow of transactions, and low confidence in the government of the country that manages the monetary system (Hamukuaya, 2021:2).

1.2. Overview of the crypto asset system

In 2008, the pseudonymous Satoshi Nakamoto posted a white paper (Nakamoto, 2008) that describes the implementation of a digital currency called Bitcoin which uses blockchain technology. While the original white paper did not use the term cryptocurrency, Nakamoto posed the project as a peer-to-peer ‘currency’ in a network; thereafter, the term cryptocurrency soon gained momentum in the online community (Pernice and Scott, 2021:2).

Härdle et al. (2019:4) described a cryptocurrency as:

‘a digital asset designed to work as a medium of exchange using cryptography to secure transactions, to control the creation of additional value units, and to verify the transfer of assets.’

Crypto assets or cryptocurrencies are transferable digital representations which are constructed in a way that prohibits their copying or duplication. The technology that enables the transfer of crypto assets is referred to as a blockchain (PWC, 2021:2). Härdle

et al. (2019:3) further mentioned that cryptocurrencies operate on a peer-to-peer basis, eliminating the middleman, thus operating independently from a financial institution.

1.1.1. Blockchain technology and crypto asset

Hyatt describes blockchain as (Hyatt, 2021):

‘a digital ledger of transactions. This ledger (or database) is distributed across a network of computer systems. No single system controls the ledger. Instead, a decentralized network of computers keeps a blockchain running and authenticates its transactions.’

Crosby et al. (2016:8) stated that:

‘a blockchain is essentially a distributed database of records or public ledger of all transactions or digital events that have been executed and shared among participating parties. Each transaction in the public ledger is verified by consensus of a majority of the participants in the system. And, once entered, information can never be erased. The blockchain contains a certain and verifiable record of every single transaction ever made.’

Distributed consensus and anonymity are two key attributes of blockchain technology. The technology can be used to verify each and every online transaction involving digital assets and the blockchain achieves the distributed consensus without compromising the confidentiality of the digital asset and the parties involved in the transaction (Crosby et al., 2016:8).

Investors will purchase a crypto asset if they believe in the strength and utility of the underlying blockchain. As all crypto assets run on blockchain technology, investors are betting on the resiliency and attractiveness of that blockchain (Hyatt, 2021).

Proof of work and proof of stake are validation techniques which are used to verify transactions. These validation techniques verify the transactions before they are added to a blockchain network (Ashford and Schmidt, 2020).

A paper published by Deloitte (Deloitte, n.d. 25) describes proof of work as:

‘a system that relies on a consensus algorithm to computational power. More precisely, a proof of work is a problem which is difficult (costly, time-consuming) to solve but easy for others to verify and which satisfies certain requirements. In the blockchain framework, the proof of work relies on the computation of hashes: in order for a block to be accepted by network participants, the miners must complete a proof of work which covers all of the data in the block. Due to the computational power spent by the miners for the proof of work, a miner is remunerated with transaction costs and/or an amount of newly-generated cryptocurrency once a block he/she mined is accepted by the network.’

The paper (Deloitte, n.d. 25) further states that:

‘Proof of Stake is an alternative to the proof of work system, in which your existing stake in a cryptocurrency (the amount of that currency that you hold) is used to calculate the amount of that currency that you can mine. More precisely, the creator of the next block is chosen via an algorithm which combines randomization with stake. The probability of being chosen as the next proposer of a block is proportional to the stake one holds.’

Hari (2015:115) states that ‘in cryptocurrency, a transaction is a transfer of coins from one wallet to another.’ Therefore, the details of the transaction will be broadcast to every node in the network. The transactions are then collected to form a ‘block’. The system is designed in a manner that ensures all the transactions which have been made from the inception of the currency are recorded and maintained in a general ledger called the blockchain' (Hari, 2015:115.)

1.1.2. How does the mining of crypto assets work?

The mining of crypto assets is the process of releasing new units of crypto assets into the market in exchange for validating or verifying transactions (Ashford and Schmidt, 2020). Bitcoin’s supply is limited to 21 million coins of which 18.77 million have already been mined. In the 12 years since Bitcoin was created, 83% of all Bitcoin has already been placed into circulation (Pratabh, 2021).

The mining of crypto assets is a fundamental process whereby the generation, transmission and verification of transactions are performed. The mining of crypto assets guarantees a stable, secure, and safe transmission of the crypto assets between transacting parties. Fiat currencies are controlled and regulated by a centralized controlling authority, unlike crypto assets which are decentralized and work on a peer-to-peer system (Hari, 2015:115).

The crypto asset mining space is continuously evolving as new technologies emerge. Professional miners who receive the best rewards are constantly studying the space and optimising their mining strategies to increase their efficiency and performance (Freeman, 2020a).

Hari (2015:115) said that banks require massive infrastructure to generate physical currency and monitor transactions. This requirement is mitigated through the use of crypto assets, where the transacting parties within the crypto asset network, called 'miners' would monitor and verify the transactions. Miners play a vital role in the mining of crypto

assets. Miners process transactions by verifying the ownership of the crypto asset from source to destination (Hari, 2015:115).

The primary objective of crypto asset mining is to generate and release crypto assets into the market. Each time a transaction takes place and is verified by the miner, the transaction is added to the block that the miner is solving. Every block must be solved by the miner before being broadcast and included in the blockchain. The blocks are solved by solving difficult mathematical problems. Once the mathematical problems have been solved, the blocks are added to the ledger and the miner is awarded crypto assets in return (Hari, 2015:115.)

1.1.3. How does a crypto asset exchange work?

A crypto asset exchange or digital currency exchange is a platform that enables clients to trade crypto assets for fiat currencies, other crypto assets, and digital currencies. The exchange of crypto assets on a digital currency exchange is similar to how a stock is exchanged on regular stock exchanges – the difference between the two platforms is the way traders make a profit. On a regular stock exchange, traders buy and sell stocks to profit from their changing rates, while on a digital currency exchange, traders use crypto asset trading pairs to profit from the highly volatile currency rates (Gatehub, 2020).

A crypto trading pair is a pair of crypto assets that can be traded for each other (Luno, 2021b). In doing so, the value of one crypto asset is measured in terms of a different crypto asset (CNBCTV18, 2022).

Luno is one of the digital currency exchanges available to taxpayers in South Africa; it is a platform that matches buyers of the crypto asset with sellers. In order to make a purchase or an exchange on Luno, a buyer must fund their exchange account (known as a wallet) with fiat currency or another crypto asset. The buyer then places a ‘buy’ order on Luno. This is a request to buy the crypto asset at a price of their choice. This and all other ‘buy’ and ‘sell’ orders are added to the ‘order book’. The order book is a list of the amounts of crypto assets that all the traders wish to buy and sell as well as their preferred buying and selling prices (Luno, 2021a.)

Digital currency exchanges do not set the prices of crypto assets; the price is set by the supply and demand of the crypto asset. A digital currency exchange works as an intermediary, connecting the buyers to the sellers (Luno, 2021a.)

1.3. Crypto assets in South Africa

1.3.1 The regulation of crypto assets in South Africa

The initial public statement on crypto assets was issued by the National Treasury in 2014 in conjunction with the SARB, the Financial Sector Conduct Authority, SARS, and the Financial Intelligence Centre. Members of the public were warned about the risks associated with the use of crypto assets and to exercise extreme caution when transacting or investing in crypto assets. The public statement further noted that no specific legislation or regulation exists for the use of crypto assets (Department: National Treasury. 2021:1-2.)

Following the public statement, the SARB, through the National Payment System Department, issued a position paper on crypto assets in 2014 that emphasised the risks surrounding crypto assets, such as money laundering and the financing of terrorism (South African Reserve Bank, 2014:5-6).

In its position paper, the SARB noted that it does not supervise, monitor, or regulate the landscape, systems, or intermediaries of crypto assets. All activities involving the acquisition, trading, or usage of crypto assets are done at the end users' own risk, with no recourse to the SARB. Further, the position paper notes the lack of a regulatory and legal framework, the absence of consumer protection requirements, and the inability to enforce payment system principles of finality and irrevocability as well as the circumvention of foreign exchange regulations (South African Reserve Bank, 2014:12.)

In 2016, the Intergovernmental Fintech Working Group was founded; it consists of the members from National Treasury, the SARB, the Financial Sector Conduct Authority and the Financial Intelligence Centre. The focus of the Intergovernmental Fintech Working Group is to build a mutual understanding among regulators and policymakers of financial technology (Intergovernmental Fintech Working Group, 2019: 4).

The following definition of crypto assets is adopted by the regulatory authorities, through the Intergovernmental Fintech Working Group (2019:16):

‘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.’

The Crypto Assets Regulatory Working Group was formed under the guidance of the Intergovernmental Fintech Working Group to review the position of crypto assets in South Africa. This working group consisted of members of the Intergovernmental Fintech Working Group and SARS (Intergovernmental Fintech Working Group, 2019:5.)

The Crypto Assets Regulatory Working Group released a position paper in January 2019, which was revised in April 2020. This position paper provided specific recommendations for the development of a regulatory framework for assets, including suggestions on the required regulatory changes to be implemented (Intergovernmental Fintech Working Group, 2021a:11.)

The position paper issued by the Crypto Assets Regulatory Working Group states that crypto assets are not regarded as a legal tender (Intergovernmental Fintech Working Group, 2021a:15). In terms of s 17 of the South African Reserve Bank Act 90 of 1989, legal tender is defined as:

‘17. Legal tender

- (1) A tender, including a tender by the 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.
- (2) A tender, including a tender by the Bank itself, of an undefaced and un mutilated coin which is lawfully in circulation in the Republic and of current mass, shall be a legal tender of payment of money...’

As crypto assets are not regarded as a legal tender, service providers can refuse to accept the crypto asset as a payment instrument without being in breach of law (The Department of National Treasury, 2014:2.)

1.3.2 The taxation of crypto assets in South Africa

The definition of a ‘financial instrument’ in s 1 of the Income Tax Act 58 of 1962 was amended by the Taxation Laws Amendment Act 23 of 2018 to include ‘any cryptocurrency’. According to the *Explanatory Memorandum on the Taxation Laws Amendment Bill* (2018:42) this amendment

‘seeks to clarify that cryptocurrency is a financial instrument and would therefore not be a personal use asset for capital gains tax purposes’.

The term ‘currency’ is not defined in the Income Tax Act 58 of 1962. Section 1(1) of the Income Tax Act 58 of 1962 defines ‘local currency’. Paragraph (b) of the definition states that local currency means the currency of the Republic. Section 15(1) of the South African Reserve Bank Act 90 of 1989 states that the monetary unit of the Republic is the Rand, therefore, crypto assets cannot be local currency in South Africa. The next question would be to determine if crypto assets meet the ‘foreign currency’ definition in s 24I of the Income Tax Act 58 of 1962.

‘Foreign currency’ is defined in s 24I(1) of the Income Tax Act 58 of 1962 as ‘any currency other than local currency’. The term ‘currency’ is not defined in the Income Tax Act 58 of 1962. If the term ‘currency’ is interpreted to include crypto assets, s 24I of the Income Tax Act 58 of 1962 could also apply to profits and losses on crypto asset transactions. SARS (2018) has confirmed that crypto assets are not regarded as ‘currency’, furthermore, the inclusion of crypto assets in the definition of a financial instrument has classified a crypto asset as an ‘asset’ instead of ‘currency’. The classification of a crypto asset as an asset will negate the application of s 24I of the Income Tax Act 58 of 1962 on any profits and losses from crypto asset transactions.

According to the *Explanatory Memorandum on the Taxation Laws Amendment Bill*, as issued on 20 January 2021 (National Treasury, 2021:50), the word ‘cryptocurrency’ was replaced with ‘crypto asset’. This change is in response to the proposal to adopt a consistent definition of crypto assets in South Africa’s regulatory framework. The insertion of the crypto asset in the definition of ‘financial instrument’ gives legislative effect to the tax treatment of crypto asset transactions in terms of the general principles of the Income Tax Act 58 of 1962 (Basson, 2021:2).

SARS issued a press release on 6 April 2018 (SARS, 2018) that stated that profits or losses resulting from crypto asset transactions can be categorised into three scenarios, each leading to a different tax treatment:

- The acquisition of new crypto assets through mining
- Crypto assets are exchanged for local currency, and
- Crypto assets are exchanged for goods and services

Financial instruments are not omitted from the definition of ‘asset’ in the Eighth Schedule of the Income Tax Act 58 of 1962, which specifically excludes currency. The inclusion of the crypto asset in the definition of financial instrument provided legislative effect to the position of SARS that a crypto asset is an asset and not a currency for normal tax purposes.

The mining, purchase, exchange, and disposal of crypto assets represent separate crypto asset transactions with specific income tax consequences that will be based on normal income tax rules within the existing tax framework. The income tax consequences depend on whether the transaction is capital or revenue in nature. The classification of a crypto asset transaction being revenue or capital in nature will be investigated using existing South African case law (SARS, 2018.)

Gross income is defined in s 1 of the Income Tax Act 58 of 1962 as:

‘in relation to any year or period 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...

during such year or period of assessment, excluding receipts or accruals of a capital nature’

In terms of the gross income definition above, an amount in cash or otherwise received for the supply of goods and services in a crypto asset transaction will be included in the gross income and will be subject to income tax of the resident taxpayer unless the transaction is of a capital nature.

In terms of *Geldenhuis v CIR* [1947] 3 All SA 379 (C); 14 SATC 419 (C) at 389, gross income includes only an amount received for a person’s own benefit or as the *bare dominium* owner. In a crypto asset transaction, the receipt of an amount in cash or

otherwise does not automatically result in its value being included in the taxpayer's gross income as the amount could be capital in nature. Taxpayers' intentions are paramount and are determined from their ipse dixit, taking into account relevant objective factors. In the context of a company, the intent is determined by the intention of the directors since they control the affairs of the company as deduced in *CIR v Richmond Estates (Pty) Ltd* 1956 (1) SA; 20 SATC 355 at 361 and *Elandsheuwel Farming (Edms) Bpk v SBI* (1978); 39 SATC 163 at 182.

If a corporate taxpayer disposes of the crypto asset in the course of its trade (as the crypto asset was held as trading stock) the resulting income will be of a revenue nature. However, if the corporate taxpayer intends to retain the crypto asset for an unspecified amount of time as part of its capital structure, the subsequent disposal of the crypto asset will be treated as capital in nature (SARS, 2018.)

SARS is increasingly auditing taxpayers' crypto asset holdings and trading activities. SARS has also requested information from certain crypto exchanges in South Africa, including Luno, about users and their crypto asset transactions on the digital exchange platform (Chong, 2021.)

1.4. The rationale for the research report

SARS has not issued an interpretation note on the tax implications of crypto asset transactions, SARS has guided on the taxation of crypto assets on its website. According to the guidance, normal income tax rules apply to crypto assets, and affected taxpayers must declare profits and losses from crypto assets as part of their taxable income (SARS, 2021a).

Section 101(1) of the Tax Administration Act 28 of 2011 prescribes that a taxpayer has the burden of proving the tax position adopted in relation to (but not limited to), an amount treated as exempt income, an amount treated as deductible, the tax rate applicable to a transaction, and the correct valuation of an amount.

The onus remains on the taxpayer to declare all taxable income related to crypto assets during the tax year in which it was earned or accrued; if not, the taxpayer will be subject to penalties and interest (SARS, 2021b). As the burden of proof rests with the taxpayer,

it is vital that sufficient guidance is available to the taxpayer in order to correctly declare all taxable income resulting from a crypto asset transaction in the tax return of the taxpayer.

This research report will examine the current legislation and guidance on the taxation of crypto assets and identify any inadequacies in the tax treatment of crypto asset transactions. Recommendations for the inadequacies identified in the tax treatment of crypto asset transactions will be established by conducting a comparative analysis between the legislation and guidance issued by Australia, South Africa, and the United States of America.

Australia and the United States of America have been selected for analysis for the following reasons:

1. Australia

- 1.1. Around 17% of Australians own crypto assets based on a report by Finder (2021). Australia is a developed country (United Nations, 2021:3) that is increasing the adoption of cryptocurrency transactions (ComplyAdvantage, 2021).
- 1.2. According to the Australian Tax Office (Australian Tax Office [ATO], 2020), cryptocurrencies are taxed as a form of property and are subject to capital gains tax regulations which can be compared to the guidance provided by the South African Revenue Service.
- 1.3. The Australian Tax Office has issued Taxation Determination Notices to guide the tax treatment of cryptocurrency transactions and its tax administration.

2. United States of America

- 2.1. The United States of America is the market leader in cryptocurrency (Kharpal, 2021).
- 2.2. The IRS issued *IRS Notice 2014-21* (IRS, 2014b) as guidance for individuals and businesses on the tax treatment of transactions using virtual currencies (IRS, 2014).
- 2.3. The IRS published a document called *Frequently Asked Questions on Virtual Currency Transactions* (IRS, 2019a) for individuals who hold cryptocurrency

as a capital asset and are not engaged in the trade or business of selling cryptocurrency (IRS, 2014).

2.4. The South African Revenue Service also published a list of *Frequently Asked Questions: Crypto assets* (SARS, 2021a) which will be compared to the *Frequently Asked Questions on Virtual Currency Transactions* (IRS, 2019a) issued by the IRS.

1.5. Research problem and sub-questions

1.5.1. Research problem

The primary research question that will be answered in this research report is:

What are the inadequacies in the South African tax legislation in respect of crypto asset transactions, and what are the possible remedies that can be identified from a comparison with the legislation in certain Australian and American crypto asset transactions?

1.5.2. Sub-questions

In order to address the research problem posed, the following sub-questions have been formulated:

- What are crypto asset transactions?
- What are the income tax implications of crypto asset transactions in South Africa, namely where:
 - the crypto asset was held as trading stock and utilised as a part of a barter transaction;
 - the crypto asset was held as a capital asset and utilised as a part of a barter transaction;
 - the crypto asset is exchanged for local currency (or vice versa) by using crypto asset exchange platforms; and
 - crypto assets are mined.

- What are the inadequacies identified with the taxation of crypto assets in South Africa when compared to the taxation of crypto assets in Australia and the United States of America?
- What remedies for the inadequacies in the taxation of crypto assets in SA can be identified from the comparison with the taxation of crypto assets in the other two countries?

1.6 Research methodology

The research problem and research sub-questions will be answered through a qualitative study of various primary and secondary resources. A literature review will also be performed of the relevant legislation, case law, textbooks, and applicable electronic resources in order to identify the current tax treatment of crypto asset transactions in South Africa. The primary sources that will be analysed are the Income Tax Act 58 of 1962, applicable case law, and specific guidance or communication provided by SARS. The specific guidance and communication provided by SARS are as follows:

- Press release issued by SARS on 6 April 2018, which provided clarity on how profits and losses arising from crypto asset transactions should be taxed.
- The amendment of the definition of ‘financial instrument’ in s 1 of the Income Tax Act 58 of 1962 on 20 January 2021 (National Treasury, 2021:50) to include ‘any crypto asset’.
- SARS has not issued an interpretation note on the tax implications of crypto asset transactions. However, in August 2021, SARS provided further guidance on the taxation of crypto assets on their website (SARS, 2021b).

This research report will compare the taxation of crypto asset transactions in Australia and the United States of America to the tax treatment of crypto asset transactions in South Africa to answer the sub-questions. The literature review of the abovementioned countries will address the following questions:

- How are crypto asset transactions treated for taxation purposes?
- How do they compare with the South African tax position? and

- What are the solutions and recommendations in order to remedy the inadequacies in the South African tax treatment of crypto asset transactions?

The secondary sources used will include books, research reports, and academic journals accessed from internet sources.

CHAPTER 2: TAXATION OF CRYPTO ASSETS IN SOUTH AFRICA

2.1. Introduction

Crypto assets are included in the definition of a 'financial instrument' in terms of s 1(1) of the Income Tax Act 58 of 1962. This inclusion classifies crypto assets as assets instead of currency for normal tax purposes; therefore, SARS would apply normal income tax rules on any profits or losses made from crypto asset transactions (SARS, 2018).

This chapter will provide an overview of the normal tax implications that will apply to the profits or losses made from crypto asset transactions.

2.2. Crypto asset transactions

A press release issued by SARS (2018) provided guidance on the tax treatment of crypto assets and stated:

'Gains or losses in relation to cryptocurrencies can broadly be categorised with reference to three types of scenarios, each of which potentially gives rise to distinct tax consequences:

- (i) A cryptocurrency can be acquired through so called 'mining'. Mining is conducted by the verification of transactions in a computer-generated public ledger, achieved through the solving of complex computer algorithms. By verifying these transactions, the 'miner' is rewarded with ownership of new coins which become part of the networked ledger.

This gives rise to an immediate accrual or receipt on successful mining of the cryptocurrency. This means that until the newly acquired cryptocurrency is sold or exchanged for cash, it is held as trading stock which can subsequently be realized through either a normal cash transaction (as described in (ii) or a barter transaction as described in (iii) below.

- (ii) Investors can exchange local currency for a cryptocurrency (or vice versa) by using cryptocurrency exchanges, which are essentially markets for cryptocurrencies, or through private transactions.

- (iii) Goods or services can be exchanged for cryptocurrencies. This transaction is regarded as a barter transaction. Therefore, the normal barter transaction rules apply.'

Based on the guidance provided by SARS, there are three distinct transactions that have income tax consequences (SARS 2018):

- The acquisition of new crypto assets through mining

- Crypto assets exchanged for local currency, and
- Crypto assets exchanged for goods or services

In order for the profit made on a crypto asset transaction to be taxable in the South African context, each crypto asset transaction would need to result in either gross income as defined in s 1(1) of the Income Tax Act 58 of 1962 or a capital gain in terms of the Eighth Schedule.

The determination of whether the amount received or accrued is subject to gross income or has capital gains tax implications depends on established tax principles based on existing case law and differs according to whether the crypto asset was held as trading stock or where the crypto asset was held as a capital asset (SARS, 2018.)

2.3. Crypto assets held as trading stock

In a crypto asset transaction, where the crypto asset is held as trading stock, any profits and losses made on a crypto asset transaction are subject to normal income tax rules. The provisions that would apply are as follows:

- the definition of ‘gross income’ as defined in s 1(1);
- the general deduction formula in s 11(a), read with s 23(g); and
- the provisions relating to trading stock in s 22.

2.3.1 Gross income definition

In the case of a South African tax resident, ‘gross income’ is defined in s 1(1) of the Income Tax Act 58 of 1962 as:

‘the total amount, in cash or otherwise, received by or accrued to or in favour of such resident ... during such year or period of assessment, excluding receipts or accruals of a capital nature.’

The key elements of the gross income definition must be analysed to determine if the profits resulting from the crypto asset transaction would meet the requirements of the gross income definition.

2.3.1.1 Total amount in cash or otherwise

On the basis of the gross income definition in s 1(1) of the Income Tax Act 58 of 1962, the first step in determining the gross income of a taxpayer for a particular year of assessment is to determine the total amount that has either been received by or accrued to that taxpayer during that particular year.

The proceeds from the disposal of crypto assets held as trading stock will be gross income as defined in terms of s 1(1) of the Income Tax Act 58 of 1962. The crypto asset would be generally disposed of in exchange for fiat currency or in exchange for goods or services from suppliers accepting the crypto asset as a form of payment (SARS, 2018).

The ‘amount’ need not necessarily be in the form of money, according to *Lategan WH v CIR* (1926) 2 SATC 16 at 19 where Watermeyer J, who gave the judgment, stated:

‘The definition seems to contemplate that ‘gross income’ shall...always be a sum of money, because it uses the words ‘total amount’, and amount usually means an amount of money. But the word ‘income’ in its ordinary sense does not always consist of money, as was pointed out in Booyesen’s case. ‘Income’, unless it is in some form such as pension or annuity, is what a man earns by his work or his wits or by the employment of his capital. The rewards which he gets may come in the form of cash or of some other kind of corporeal property, or in the form of rights.’

It was held in *Lategan v CIR* at 20 that the term ‘amount’ includes not only money but the value of every form of property earned by the taxpayer that has a monetary value, whether corporeal or incorporeal. Where the taxpayer uses a crypto asset to purchase goods and services (including the exchange of one crypto asset for another), it would constitute a barter transaction. The market value of the goods or services received would represent gross income as defined in terms of s 1(1) of the Income Tax Act 58 of 1962.

As held in *CIR v People’s Stores (Walvis Bay) (Pty) Ltd* 1990 (2) SA353 (A), 52 SATC 9 at 10, Hefer JA stated the following:

‘The first and basic proposition is that income, although expressed as an amount in the definition, need not be an actual amount of money but may be ‘every form of property earned by the taxpayer, whether corporeal or incorporeal, which has a money value...including debts and rights of action. This proposition is obviously correct so that very little need be added to what Watermeyer J himself said in support thereof.’

Hefer JA accepted the judgment made by Watermeyer J in *Lategan v CIR* at 20 where it was held that an amount need not only be in the form of money, but the value of every form of property earned by the taxpayer, as long as it has a monetary value.

In the case of *CIR v Delfos* 1933 AD 242 6 SATC 92 at 99, the following was held by Wessels CJ:

‘The tax is to be assessed in money on all receipts or accruals having a money value. If it is something which is not money’s worth or cannot be turned into money, it is not to be regarded as income.’

An amount must therefore be in cash or have a monetary value in order for it to be included in gross income.

The term ‘cash or otherwise’ means not only receipts or accruals in the form of money that will be included in gross income, but also amounts that have a monetary value and can be converted into money, as was found in the case of *CIR v Delfos* at 99.

The cases above have confirmed that ‘total amount in cash or otherwise’ does not necessarily include money, but also corporeal or incorporeal goods that have a monetary value. By applying the objective test, as held in *CSARS v Brummeria Renaissance (Pty) Ltd* [2007] JOL 20634 (SCA) at 9, crypto assets are considered to have monetary value since the receipt or accrual of crypto assets is valuable and has monetary value that can be determined by the market value of the crypto asset. The market value can be calculated from a digital currency exchange at a given moment as well as the value in the past (Luno, 2022a).

Crypto asset is not fiat currency, but it has value as intangible cyber property. Like cash, it is an accepted means of payment (Luno, 2020). Crypto asset has a monetary value that can be converted into fiat currency and vice versa. However, the value is neither fixed nor constant. Generally, the value of a crypto asset is based on the subjective determination of its community of users (Moosa, 2019:30).

In the absence of guidance from SARS on the method of valuing crypto assets, the value of a crypto asset for tax reporting purposes would be the average price for a crypto asset determined with reference to at least two crypto asset pricing indices used or accepted in South Africa such as on a digital currency exchange operating in South Africa (Moosa, 2019:30.)

Valuation of the amount received or accrued

It was held in *South Atlantic Jazz Festival (Pty) Ltd v CSARS* 77 SATC 254 at 246 that in an ordinary arm's length barter transaction, the market value attributed to goods or supplies by the parties involved would provide a reliable indication of their value. Therefore, the value of the crypto asset bartered in exchange for goods and services would be the market value of the crypto asset on the date of payment or receipt (valuation date) in an arm's length transaction.

2.3.1.2 Received by or accrued to

In terms of the gross income definition in s 1(1) of the Income Tax Act 58 of 1962, the total amount in cash or otherwise should be received by or accrued to the taxpayer. The term 'received by or accrued to' is not defined in the Income Tax Act 58 of 1962; therefore, the meaning needs to be determined by referring to case law (Stiglingh et al., 2014:19).

The term 'received by or accrued to' implies that a taxpayer must include not only income received by the taxpayer but must also include income accrued to the taxpayer during the year of assessment. In terms of the gross income definition in s 1(1) of the Income Tax Act 58 of 1962, this term is mainly related to time and determines the particular tax year in which the gross income is realised. The Commissioner may not include the amount both when it accrues and when it is received, as this would lead to double taxation. For this reason, an amount should be included earlier of receipt or of accrual (Stiglingh et al., 2014:22-25.)

The meaning of 'received by'

The word 'received by' is interpreted as an amount that is received by the taxpayer, on his own behalf for his own benefit as held in *Geldenhuis v CIR* at 381. In *Geldenhuis v CIR* at 381, the widow of a farmer had sold livestock after her husband's death. According to the court, the proceeds of the sale did not accrue to her personally since they did not form part of her income but belonged to her heirs. The fact that the widow received the proceeds was irrelevant since the proceeds were not received by her for her own benefit. An amount will only fall into gross income if the amount is received by the taxpayer for

his or her own benefit, even if the amount has not yet accrued to the taxpayer (Stiglingh et al., 2014:19-22.)

The meaning of 'accrued to'

An amount has accrued to a person when the income becomes due to that person even if the amount is not yet payable. The meaning of 'accrued to' can be interpreted as 'entitled to' as held in *Lategan WH v CIR* at 20.

The entitlement arises out of an underlying obligation (a contract or a delict), and the intention of the taxpayer is irrelevant. In a crypto asset transaction where the taxpayer has engaged in a contract with a party to render services and consideration for the services is agreed to be crypto assets, entitlement would arise when the services have been rendered and the proceeds have been accrued for the benefit of the taxpayer (Stiglingh et al., 2014:19-22.)

However, in *CIR v Delfos* at 100, there was a disagreement about whether the proceeds do accrue to the taxpayer in the year of assessment in which it becomes due and payable or in the year of assessment in which the taxpayer is entitled to the proceeds. As a result of *Lategan v CIR* at 20 and *CIR v Delfos* at 100, uncertainty arose as to whether 'accrued to' means 'entitled to' or whether it implies 'due and payable'. The appropriate clarification of 'accrued to' remained unresolved for many years until the decision was held in the case of *CIR v People's Stores (Walvis Bay) (Pty) Ltd* at 11, all the Appeal Judges held that:

The outstanding instalments accrued to the taxpayer in the view of the fact, that it was entitled thereto, although the amounts would only be due and payable in the following year of assessment.

The decision confirmed the interpretation of 'accrued' means 'becomes entitled to'.

Accrual occurs when a taxpayer is unconditionally entitled to an amount even though it may only be payable in the future as held in *CIR v People's Stores (Walvis Bay) (Pty) Ltd* at 11. It was held in *CIR v Golden Dumps (Pty) Ltd* at 118 that a right to receive payment must be due to a taxpayer in the sense that the right is not dependent on the fulfilment of a condition affecting either a taxpayer's entitlement or its quantum. If the payment of the consideration is subject to a contingent obligation in a contract, then an accrual would

only arise in the year of assessment when the contingency falls away. Parties would become entitled to proceeds of the transaction once they have completed their duties in terms of the contract as held in *Cactus Investments (Pty) Ltd v CIR* 1999 1 SA 315 (SCA):320 H at 320. As such, where a contract in a crypto asset transaction notes a conditional obligation, the proceeds of the transaction will not accrue to the taxpayer until the fulfilment of the obligation.

2.3.1.3 Not a receipt or accrual of capital nature

The definition of gross income in s 1(1) of the Income Tax Act 58 of 1962, specifically excludes any receipts or accruals which are of a capital nature. The Income Tax Act 58 of 1962 does not define the term ‘of a capital nature’ nor does it provide a test that distinguishes revenue from capital nature (SARS, 2020:15).

*The Comprehensive Guide to Capital Gains Tax*² (SARS, 2020:52) states that given that crypto asset prices are volatile, they are likely to be held as speculative assets of a revenue nature. Speculative assets of a revenue nature would generally fall within the definition of trading stock. The press release issued by SARS (SARS, 2018) indicated that existing case law should be applied to determine whether a receipt or accrual relating to crypto assets is capital or revenue in nature.

The receipts or accruals from a crypto asset transaction are either categorised as capital or revenue in nature and may not be half of either. This principle was held in the South African case of *Pyott Ltd v Commissioner for Inland Revenue* 1945 AD 128 13 SATC 121 (A) 126 (*Pyott Ltd v CIR*) at 126.

Where, for example, a taxpayer receives crypto assets as payment for goods or services, the market value of the transaction must be determined for inclusion in gross income. For an amount to be included in gross income it must be revenue in nature; therefore, the taxpayer must have the intention of making profits which has been guided by the decision held in *Elandsheuwel Farming (Edms) Bpk v SBI* (1978) 39 SATC 163 at 181.

² The guides are neither ‘official publications’ as defined in s 1 of the Tax Administration Act 28 of 2011, nor are they binding on SARS. They are merely intended to assist taxpayers in the practical interpretation and application of the requirements set by law (SARS, 2021c.)

Fruit-and-tree principle

An analogy often used to distinguish between capital receipts from revenue receipts is that of a tree and its fruit (Haupt, Haupt and Haupt, 2019:43).

Maritz J held in *CIR v Visser* (1937) 8 SATC 271 (*CIR v Visser*) at 276 that:

‘Income’ is what ‘capital’ produces, or is something in the nature of interest or fruit as opposed to principal or tree. This economic distinction is a useful guide in the matters of income tax, but its application is very often a matter of great difficulty, for what is principal or tree in the hands of the one man may be interest or fruit in the hands of another. Law books in the hands of a lawyer are a capital asset; in the hands of a bookseller, they are a trade asset. A farm owned by a farmer is a capital asset; in the hands of a land-jobber it becomes stock-in-trade.’

Income which has been produced by an income-producing asset is revenue in nature, whilst the income-producing asset is of a capital nature. Therefore, receipts and accruals that are capital in nature would be the crypto asset capital that is invested to produce interest on the crypto asset saving wallets (Luno, 2022b).

The real issue is not with the underlying nature of the asset, but how the taxpayer deals with it or perceives it (Stiglingh et al., 2014:43). The most important test used by the courts in deciding whether a receipt in respect of the disposal of an asset is income or capital in nature is the intention of the taxpayer as guided by the decision held in *CIR v Visser* at 276.

Intention

The dominant intention with which a taxpayer acquires an asset determines whether it is capital or revenue in nature. The courts have laid out various tests in deciding whether a receipt is of a capital or revenue nature. The rule was held in *CIR v Scott* (1928) 3 SATC 253 (*CIR v Scott*) at 254 that the intention of the taxpayer at the date of acquisition must be ascertained and that it can be possible to have a change of intention before the sale of the asset (Haupt, Haupt and Haupt, 2019: 44).

The taxpayer’s intention at acquisition can be either of the following (Haupt, Haupt and Haupt, 2019:44):

- Investment – to acquire and hold an asset as an income-producing asset. An asset held for investment purposes is a capital asset and where the change of intention has not occurred, the disposal of such an asset will result in a receipt of a capital nature.
- Speculation – to acquire an asset for making a gain upon disposing of the asset in a scheme of profit-making as guided by the decision held in *Lace Proprietary Mines Ltd v CIR* 1938 AD 267, 9 SATC 349 (*Lace Proprietary Mines Ltd v CIR*) at 351. The taxpayer does not hold the asset for use as an income-producing asset but realises a profit intrinsic in the asset.

A change in intention would lead to a change in the nature of the asset from the capital to revenue in nature. Once the intention of the taxpayer has been established upon acquisition of the asset, it is also important to determine if there was a change in intention before the disposal of the asset. It is important to note that the mere fact that an asset is sold at a profit does not in itself indicate that a change in intention has occurred (*Haupt, Haupt and Haupt, 2019:47*). Something more is required to constitute a change in intention as held in *CIR v Scott* at 261.

The above considerations are important for the determination of the intention of the taxpayer, especially given that the holding of crypto assets is not subject to the deeming provision of s 9C of the Income Tax Act 58 of 1962 which provides that equity shares held for a period of at least three years are treated as being capital in nature.

In some cases, it will be difficult to determine whether a gain resulting from crypto asset price fluctuations was incidental or secondary to the taxpayer's primary intention. In order to determine if the crypto asset is held on a capital or revenue account, other factors are also required to be considered, such as but not limited to (*Lobban, 2018:17*):

- the reason and circumstances in which an asset was sold,
- the manner of its disposal,
- length of time the asset was or has been held, and
- the frequency of similar disposals.

The practical difficulties that may arise in determining whether a taxpayer holds a crypto asset on a capital or revenue account may be mitigated by considering the period for which the crypto asset was held.

2.3.2 General deduction formula - Section 11(a) and Section 23 (g)

SARS has indicated through its press release (2018) that:

‘Taxpayers are also entitled to claim expenses associated with cryptocurrency accruals or receipts, provided such expenditure is incurred in the production of the taxpayer’s income and for purposes of trade.’

The general deduction formula provides for the deduction of expenses incurred in carrying of a trade in terms of s 11(a) and s 23(g) of the Income Tax Act 58 of 1962. As a result, these expenses will be deducted from the receipts or accruals of the crypto asset transaction in order to arrive at a taxable income or loss.

Section 11(a) of the Income Tax Act 58 of 1962 states:

‘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;’

Section 23(g) of the Income Tax Act 58 of 1962 specifically prohibits the deduction of any expenses to the extent to which such expenses were not incurred for the purposes of carrying on a trade. In *Port Elizabeth Electric Tramway Co Ltd v CIR* [1936] 8 SATC 13 (*Port Elizabeth Electric Tramway Co Ltd v CIR*) at 14, it was held that s 11(a) and s 23(g) of the Income Tax Act 58 of 1962 must be read together when determining if an amount will be deducted; therefore, the positive test per s 11(a) of the Income Tax Act 58 of 1962 must be applied in conjunction with the negative test in s 23(g) of the Income Tax Act 58 of 1962.

Section 11(a) of the Income Tax Act 58 of 1962 therefore provides for the deduction of expenditure and losses actually incurred in the production of the income provided that such expenditure or loss is not of a capital nature. The requirements of s 11(a) of the Income Tax Act 58 of 1962 are discussed below.

2.3.2.1 Carrying on a trade

The general deduction formula permits a deduction only if the taxpayer is engaged in carrying on a trade.

According to s 1 of the Income Tax Act 58 of 1962, 'trade' is defined as:

'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 as defined in the Patents Act or any design as defined in the Designs Act or any trade mark as defined in the Trade Marks Act or any copyright as defined in the Copyright Act or any other property which is of a similar nature.'

In *Burgess v CIR* (1993) 55 SATC 185(A) (*Burgess v CIR*) at 189, the court held that the term 'trade' must be given a wide meaning and must include any 'venture' in which risk is undertaken with the purpose of making a profit. Therefore, if a taxpayer is carrying on a business, the taxpayer will also be 'carrying on a trade'. In defining 'trade', the court in *Burgess v CIR* at 189 implied that the term 'carrying on a trade' should also be given the widest possible interpretation. The court in *Burgess v CIR* at 189 took the view that any profitable activity would be regarded as carrying on a trade, even if it was a single activity.

Whether a taxpayer is carrying on a trade will depend on the facts of each case as held in *CIR v Genn & Co (Pty) Ltd* (1955) 20 SATC 113 (*CIR v Genn & Co (Pty) Ltd*) at 120 which held that whether expenditure is incurred in the production of income depends on the circumstances of the case.

SARS issued *Interpretation Note 33* (2017:4-6) which dealt with assessed losses in companies, and the requirements of the term 'trade' and 'income from trade' are also discussed in the interpretation note. Below are points that should be noted when considering if a taxpayer is carrying on a trade:

- The watching over investments does not constitute a trade; and
- Whether a company is carrying on business as an investor of money will depend on the facts and circumstances of the particular case. Much will depend on the scale and nature of its activities.

Therefore, in a crypto asset transaction, where the crypto asset is mined, held as trading stock or used for speculative purposes and not for investment purposes, the crypto asset

transaction would satisfy the ‘trade’ requirement as required in the definition of the general deduction formula.

2.3.2.2 Expenditure and losses

The courts have held on how the terms ‘expenditure’ and ‘losses’ need to be interpreted in order to determine the difference between the two terms (Haupt, Haupt and Haupt, 2019:111).

In *Joffe & Co (Pty) Ltd v CIR* (1946 AD 157) (13 SATC 354 (*Joffe & Co v CIR*) at 360, ‘expenditure’ was held to mean a voluntary payment and ‘losses’ was found to mean a deprivation suffered by the loser, usually involuntarily. In *Port Elizabeth Tramway Co Ltd v CIR* at 14, the courts considered that the term ‘losses’ may refer to losses of floating capital.

SARS (SARS, 2018) has indicated that certain expenses associated with cryptocurrency accruals or receipts will be deductible, provided that ‘such expenditure is incurred in the production of the taxpayer’s income and for purposes of the trade’. Therefore, expenditure incurred in the mining of crypto assets, such as electricity costs, will be deductible as it expenditure intrinsic to the taxpayer’s trade.

It was held in *Caltex Oil (SA) Ltd v SIR* at 674 that the market value of the taxpayer’s performance in terms of a barter transaction must be valued in rand to be claimed as a deduction. Therefore, the market value of goods or services transferred in exchange for crypto assets in a barter transaction (where the asset is not acquired as a capital asset) will be allowed as a deduction in terms of the general deduction formula. In terms of the principles held in the *South Atlantic Jazz Festival (Pty) Ltd v CSARS* (2015) 77 SATC 254 at 256, the market value of the goods and services transferred in a barter transaction would be equivalent to the market value of the crypto asset acquired.

2.3.2.3 Actually incurred

In *Port Elizabeth Electric Tramway Company v CIR* at 14, Watermeyer AJP held that s 11(a) of the Income Tax Act 58 of 1962 refers to ‘actually incurred’ and not ‘necessarily incurred’. This indicates that a taxpayer can incur expenses that another taxpayer would

not incur, and the expense would still qualify for a deduction, provided that the expense meets all other necessary requirements.

A liability does not need to have been paid for it to have been incurred by the taxpayer. As long as the liability has actually been incurred, it will be deductible (Haupt, Haupt and Haupt, 2019:111.)

The meaning of ‘actually incurred’ was addressed by Corbett JA in delivering the judgment of the majority of the Appellate Division in *Edgars Stores Ltd v CIR* (71a/88) [1988] ZA SCA 71 at 3 in which it was held that:

‘It is clear that only expenditure (otherwise qualifying for deduction) in respect of which the taxpayer has incurred an unconditional legal obligation during the year of assessment in question may be deducted in terms of s 11(a) from income returned for that year . . . if the obligation is initially incurred as a conditional one during a particular year of assessment and the condition is fulfilled only in the following year of assessment, it is deductible only in the latter year of assessment’

Therefore, there must be an unconditional legal liability to pay an amount before an amount is ‘actually incurred’. If there is no definite and absolute liability during the year of assessment to pay an amount, expenditure has not been ‘actually incurred’ as held in *Nasionale Pers Bpk v KBI* (1986 A) 48 SATC 55 at 56 and therefore is not deductible in terms of s 11(a) of the Income Tax Act 58 of 1962.

2.3.2.4 In the production of income

In terms of the general deduction formula, any expenditure that has not been incurred for the purpose of producing income is not allowed as a deduction. The term ‘income’ is defined in s 1 of the Income Tax Act 58 of 1962, which is gross income less exempt income. An expense should be ‘closely linked’ to the operations of the business in order to be considered an expense incurred in the production of income, as held in *Port Elizabeth Electric Tramway Co Ltd v CIR* at 14.

The taxpayer would need to consider the two questions as considered in *Port Elizabeth Electric Tramway Co Ltd v CIR* at 14 in establishing whether expenditure arising from a crypto asset transaction is incurred ‘in the production of income’:

- What action gives rise to the expenditure and what is the purpose of the action?;
and
- Is the expenditure so closely linked or connected to the taxpayer's business or the act of earning the income that it will be regarded as part of the cost of performing it?

Therefore, where the expenditure in a crypto asset transaction is closely connected and a necessary concomitant of the income-earning business activities, the expenditure would be allowed as a deduction, provided the expenditure is not of a capital nature.

Where a taxpayer is a crypto asset miner and/or holds the crypto asset as trading stock, the following expenditure will be seen as closely connected and a necessary concomitant of the income-earning business activities, including but not limited to:

- Electricity;
- Wear and tear on hardware and software;
- Repairs made to hardware and software;
- Rental payments if space is rented out to run the crypto asset mining activity

Where the taxpayer is performing the crypto asset mining activity in a home office, deductions will be claimable based on the portion of the home that is exclusively dedicated to the mining operation; this will be in terms of s 11(a) read in conjunction with s 23(b) and s 23(m) of the Income Tax Act of 1962.

2.3.2.5 Not of a capital nature

The expenses or losses that are incurred by the taxpayer using crypto assets in the production of income must also not be of a capital nature in order for the expense to be deductible in terms of s 11(a) of the Income Tax Act 58 of 1962.

The courts have given guidelines to distinguish between 'capital' and 'revenue' expenditure. It was held in *CIR v George Forest Timber Co Ltd* (1 SATC 20) at 21 that where the expense is more closely related to the establishment, improvement, or maintenance of the taxpayer's income-producing structure than to the working of its income-earning operations, the expenditure will be classified as capital expenditure.

The principle illustrates that there is a difference between the expenses or losses that may be incurred in setting up the crypto asset trading activity and the expenses or losses that are incurred whilst running the operations of a crypto asset trading activity. Therefore, expenses incurred whilst running the operations of a crypto asset trading activity will not be capital in nature and will be deductible in terms of s 11(a) of the Income Tax Act 58 of 1962.

It is important to distinguish between fixed capital and floating capital when assessing whether expenditure is linked to the income-producing capital structure or the income-producing activities of taxpayers, as held in *Port Elizabeth Electric Tramway Co Ltd v CIR* at 14. As a general rule, the acquisition cost of fixed assets is capital in nature and non-deductible, while the expenditure incurred in relation to floating capital utilised in a business for the purpose of making a profit would be of a revenue nature (Haupt, Haupt, and Haupt, 2019:118).

Therefore, the purchase of a highly advanced computer system in order to facilitate the production of new crypto assets through mining would be capital in nature and will not be deductible in terms of s 11(a) of the Income Tax Act 58 of 1962.

2.3.3 Section 22: Amounts to be considered in respect of the value of trading stock

Trading stock is defined in s 1(1) of the Income Tax Act 58 of 1962 as follows:

- ‘(a) includes—
 - (i) 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;
 - (ii) anything the proceeds from the disposal of which forms or will form part of the taxpayer’s gross income, otherwise than—
 - (aa) in terms of paragraph (j) or (m) of the definition of ‘gross income’;
 - (bb) in terms of paragraph 14 (1) of the First Schedule; or
 - (cc) as a recovery or recoupment contemplated in section 8 (4) which is included in gross income in terms of paragraph (n) of the definition of ‘gross income’; or

- (iii) any consumable stores and spare- parts acquired by the taxpayer to be used or consumed in the course of the taxpayer's trade ...'

SARS (SARS, 2018) stated that crypto assets acquired through the process of crypto asset mining will be held as trading stock until it is disposed of. Parsons (2014:10) stated that crypto assets purchased with fiat currency 'may be trading stock if the intention is to dispose of them at a profit'.

Section 22(1)(a) requires that the value of trading stock that is held and not disposed of at the end of the year of assessment (closing stock) be included in taxable income at the cost price of the trading stock. The taxpayer will recoup the cost of the trading stock held at the end of the year of assessment in terms of s 22(1) and then deduct the amount at the onset of the next year under s 22(2) (Stiglingh et al., 2014:690-691.)

The classification of a crypto asset as a financial instrument in terms of the s 1(1) definition of financial instrument will prevent the taxpayer from reducing the cost price of the crypto asset in terms of s 22(1)(a) of the Income Tax Act 58 of 1962. The closing value of the crypto asset held at the end of the year cannot be reduced by any amount by which the value of a crypto asset has diminished owing to, inter alia, a decrease in market value. Therefore, the value of the crypto asset to be recouped in terms of s 22(1)(a) of the Income Tax Act 58 of 1962 is the original cost price of the crypto asset.

Section 22(3)(a)(i) of the Income Tax Act 58 of 1962 states that the cost price of trading stock is the cost incurred by the taxpayer in acquiring the trading stock, plus any further costs incurred to bring the trading stock into its existing condition and location, excluding any exchange differences. The cost price for the purposes of s 22(1)(a) of the Income Tax Act 58 of 1962 would also include the transaction fees charged by the digital currency exchange.

The cost price of a crypto asset held at the beginning of the year of assessment is deductible as the opening stock when determining the taxable income in terms of s 22(2) of the Income Tax Act 58 of 1962. Therefore, s 22(1)(a) is read with s 22(2) of the Income Tax Act 58 of 1962, which prevents the taxpayer from reducing their taxable income by the expenditure incurred to acquire crypto assets until such time as the crypto asset is disposed of.

In summary, proceeds received from the disposal of a crypto asset held as trading stock, as well as the market value of a crypto asset held as closing stock in terms of s 22(1)(a) must be included in the taxpayer's taxable income. Due to the inclusion of 'any crypto asset' in the definition of 'financial instrument' in s 1(1) of the definition, the value of the closing stock to be recouped may only be the cost price of the crypto asset, and any losses due to adverse crypto asset price fluctuations may not be taken into account in determining taxable income. Any expenditure incurred in the acquisition of a crypto asset held as trading stock will be deductible in terms of s 11(a) if the crypto asset is acquired for the purposes of trade and in the production of income. The value of a crypto asset held as opening stock is deductible for normal tax purposes in terms of s 22(2) (Basson, 2019:7-9.)

2.3.4 Crypto assets acquired through mining

2.3.4.1 Taxability of profits and losses of crypto assets acquired through mining

In *Lategan v CIR* at 20, it was held that 'amount' encompasses 'every form of property earned by the taxpayer whether corporeal or incorporeal which had a money value'. The value of the crypto asset that a miner receives in a successful mining operation is valued on several digital currency exchanges at the date of receipt of the crypto asset and therefore satisfies the criteria of an 'amount' included in the definition of gross income in s 1(1) Income Tax Act 58 of 1962.

Consideration should be given as to when the crypto asset does accrue to the miner for the amount to be included in gross income. This will occur at a point where the miner becomes unconditionally entitled to the crypto asset which is based on the principles held in *CIR v Golden Dumps (Pty) Ltd* at 118. The taxpayer will be unconditionally entitled to the amount at the conclusion of a successful mining operation, at which point the crypto asset is awarded to the successful miner.

The question that then remains is whether the amount received from mining is capital or revenue in nature.

Crypto asset mining requires suitably powerful computer hardware and for participants to download and install specialised software. There is an element of a scheme of profit-

making involved in crypto asset mining. The scheme of profit-making test as encapsulated in *CIR v Pick 'n Pay Employee Share Purchase Trust* (640 of 1990) [1992] ZASCA (*CIR v Pick 'n Pay Employee Share Purchase Trust*) at 84 which held that the intention of the taxpayer was to make a profit on the disposal of an asset. A miner who regularly engages in the disposal of crypto assets for a profit would be seen as being involved in a scheme of profit making. The resultant income would, therefore, be revenue in nature.

In summary, the following tax implications will arise on the mining of crypto assets:

- The crypto assets acquired and held by the miner will be revenue in nature and classified as trading stock in respect of which a trade is carried on (SARS, 2018).
- When the taxpayer has successfully mined the crypto asset (closing stock), there will be an inclusion in gross income of an amount equal to the market value of the crypto asset on the date of acquisition in terms of s 22(1) of the Income Tax Act 58 of 1962.
- Crypto assets that were not sold in the previous year and were still held at the beginning of the current year (opening stock) will be deductible in terms of s 22(2) of the Income Tax Act 58 of 1962.
- As the taxpayer is carrying on a trade, the expenses incurred in accordance with the mining activity (e.g., electricity, rent, and salaries) will be allowed as a deduction from income in the year of assessment that they are incurred and to the extent that the expenses were incurred in the production of income in accordance with s 11(a) of the Income Tax Act 58 of 1962.
- Expenditure of a capital nature (e.g., the acquisition of computers and processing systems) that is actually incurred by the taxpayer is claimed through wear and tear or capital allowances.
- Income generated through the sale of crypto assets will be included in the taxpayer's gross income and will be subject to tax.

2.4. Crypto assets held as a capital asset

The *Comprehensive Guide to Capital Gains Tax* (SARS, 2020:52) further states that:

‘Cryptocurrencies such as Bitcoin are neither official South African tender nor widely used and accepted in South Africa as a medium of payment or exchange. As such, they are not regarded by SARS as a currency for the purposes of the Act. Given their extreme volatility, Cryptocurrencies are likely to be held as a speculative asset of a revenue nature.’

A crypto asset will constitute an ‘asset’ for capital gains tax purposes, where the taxpayer has held the crypto asset as an investment. In this case, the provisions of the Eighth Schedule will apply as crypto asset meets the definition of ‘asset’ in paragraph 1 of the Eighth Schedule. .

Paragraph 3 of the Eighth Schedule states that capital gain or loss will arise in a year of assessment upon disposal of an asset and the capital gain is equal to the amount by which proceeds received or accrued in respect of disposal exceed the base cost of the asset upon disposal. Therefore, in order to determine the capital gain or loss in terms of the Eighth Schedule, the following four points need to be considered:

- asset,
- actual or deemed disposal,
- the base cost of the asset, and
- proceeds from the disposal of the asset.

These points are addressed further below.

2.4.1 Asset

In paragraph 1 of the Eighth Schedule, an ‘asset’:

‘includes—

- (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.’

For a capital gain or loss to be determined in terms of the Eighth Schedule, the disposed asset must meet the definition of an ‘asset’ in paragraph 1 of the Eighth Schedule. Paragraph (a) of the definition of ‘asset’ in paragraph 1 of the Eighth Schedule is so broad that it can essentially include any asset (Stiglingh et al., 2014:874). SARS has confirmed

through a press release (SARS, 2018) that crypto assets are classified as an ‘asset’, therefore the disposal of which would fall within the ambit of the Eighth Schedule.

The capital gain or loss will be disregarded in terms of paragraph 53(1) of the Eighth Schedule, while capital gain or loss will be disregarded if an asset is held as a personal use asset. Paragraph 53(3)(e) states that personal use assets do not include financial instruments. Therefore, where the taxpayer holds a crypto asset as a personal use asset, the taxpayer will not be able to disregard the gain or loss on the disposal of the crypto asset in terms of par 53(1) of the Eighth Schedule as ‘any crypto asset’ is included in the definition of ‘financial instrument’ in s 1(1) of the Income Tax Act 58 of 1962.

2.4.2 Actual or deemed disposal

Paragraph 11(1)(a) of the Eighth Schedule states that a disposal of an includes:

‘the sale, donation, expropriation, conversion, grant, cession, exchange or any other alienation or transfer of ownership of an asset...’

Therefore, both the sale of a crypto asset for fiat currency and the exchange of a crypto asset to purchase goods and services can qualify as ‘disposal’ in terms of the Eighth Schedule that would give rise to a capital gain or loss provided that the crypto asset is held as a capital asset.

2.4.3 The base cost of the asset

2.3.4.2 Crypto assets purchased with fiat currency

Paragraph 20(1)(a) of the Eighth Schedule states that the base cost of an asset is the expenditure actually incurred in respect of the cost of acquisition or creation of that asset. Therefore, where a crypto asset was acquired on a digital currency exchange with fiat currency, the base cost is equivalent to the fiat currency amount paid for the crypto asset plus any fees charged by the digital currency exchange.

2.3.4.3 Crypto assets exchanged for goods in a barter transaction

In terms of the *Comprehensive Guide to Capital Gains Tax* (SARS, 2020:90), where an asset is acquired in terms of a barter transaction, the base cost of the asset is the market value of the asset given in exchange for the new asset.

Accordingly, the base cost of crypto asset acquired in exchange for goods would be the market value of the goods exchanged, as determined in terms of paragraph 31(g) of the Eighth Schedule, which states that the market value of the goods exchanged is the price which could have been obtained upon a sale of the asset between a willing buyer and a willing seller dealing at arm's length in an open market.

2.3.4.4 Crypto assets exchanged for services in a barter transaction

The initial receipt of crypto assets exchanged for services rendered will be included in gross income in terms of paragraph (c) of the definition of 'gross income' as defined in 1(1) of the Income Tax Act 58 of 1962. The amount so included in gross income will be the market value of the crypto asset received (Berger, 2016:56).

In terms of paragraph 20(1)(h)(ii)(dd) of the Eighth Schedule, the base cost of crypto assets acquired in exchange for services will be the amount that has been included in the taxpayer's gross income as consideration for the services rendered.

2.3.4.5 Crypto asset represents 'identical assets'

In determining the base cost of identical assets, paragraph 20 of the Eighth Schedule must be read in conjunction with paragraph 32. While paragraph 20 lists the associated expenditure considered in determining the base cost of assets disposed of, paragraph 32 of the Eighth Schedule contains the rules for the determination of the base cost of assets that form part of a group of similar assets.

The assets that form part of a group of similar assets are referred to as 'identical assets' or 'fungible assets' in terms of the *Comprehensive Guide to Capital Gains Tax* (SARS, 2020:328). Paragraph 32(2) of the Eighth Schedule defines 'identical assets' as:

'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.’

According to the *Business Insider* (2021), fungibility refers to an asset’s ability to be exchanged for something else of equal value. Units of crypto assets are fungible and would qualify as identical assets in terms of paragraph 32 of the Eighth Schedule. The three methods provided in paragraph 32 of the Eighth Schedule for the determination of the base cost of identical assets are the:

- specific identification method, or
- first in first out (FIFO) method, or
- weighted average method.

The weighted average approach in determining the base cost can only be used for certain types of assets listed in paragraph 32(3A) of the Eighth Schedule, which would include local and foreign financial instruments listed on a recognised exchange.

Paragraph 1 of the Eighth Schedule defines a ‘recognised exchange’ as:

‘(a) an exchange licensed under the Financial Markets Act; or

(b) . . .

(c) an exchange in a country other than the Republic which is similar to an exchange contemplated in paragraph (a) and which has been recognised by the Minister for purposes of this Schedule by notice in the Gazette.

The Johannesburg Stock Exchange and the Bond Exchange of South Africa fall under paragraph (a) of the definition of a ‘recognised exchange’. The list of recognised exchanges was published in the *Government Gazette*, namely GN R 997 in GG 22723 of 2 October 2001, and GN 1088 GG 30484 of 16 November 2007.

As crypto assets are not currently traded on a ‘recognised exchange’ as the digital exchange platforms are not included in the *Government Gazette* mentioned above, the use of the weighted average method to value crypto assets will not be allowed in determining the base cost of the crypto asset.

Therefore, the base cost of a crypto asset sold or exchanged is determined using either the first in first out or specific identification method.

2.4.4 Proceeds from the disposal of the asset

In terms of paragraph 35 of the Eighth Schedule,

‘the proceeds from the disposal of an asset by a person are 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 terms of the provisions of paragraph 31 of the Eighth Schedule where a capital asset is disposed of in terms of a barter transaction, the proceeds are equal to the market value of the asset received. Therefore, where a crypto asset is disposed of in exchange for goods and services in terms of a barter transaction, the proceeds will be the market value of those goods and services.

In terms of paragraph 42(1) of the Eighth Schedule, where a taxpayer sells a financial instrument at a capital loss and replaces those financial instruments with others of the same kind and of the same or equivalent quality within the 45-day period before or after the sale date, the transaction must be treated as if the financial instrument was disposed of for an amount equal to their base cost. Due to the provisions of paragraph 42(1), the capital loss is not taken into account at the time of disposal; it is added to the base cost of the financial instrument acquired (Basson, 2018:50–51.)

Therefore, the provisions of paragraph 42 would apply to a crypto asset transaction as ‘any crypto asset’ is included in the definition of ‘financial instrument’ in s 1(1) of the Income Tax Act 58 of 1962.

2.5. Conclusion

Crypto assets are an internet-based digital currency that is not an official South African tender and is therefore regarded by SARS as an asset for income tax purposes (SARS, 2018).

SARS issued a media statement on 6 April 2018 (SARS, 2018) stating that crypto assets are assets of an intangible nature and should be dealt with within the current tax

framework. In terms of the press release issued by SARS, the crypto asset can be acquired through the following transactions:

- Mining is where a ‘miner’ is awarded newly created cryptocurrency coins by solving complex computer algorithms. The crypto asset is held as trading stock that can then either be exchanged for fiat currency or can be used to pay for the acquisition of goods or services.
- Fiat currency can be exchanged for crypto assets; or
- Goods and services can be acquired in exchange for crypto assets.

Rules and existing principles set by case law should be applied in order to determine whether the proceeds from a crypto asset transaction are revenue or capital in nature. This classification will be done on a case-by-case basis, taking into account all relevant facts and circumstances (SARS, 2018). As such, crypto assets will be revenue in nature if the proceeds are received as part of a business in carrying out a profit-making scheme or it is acquired for speculative purposes; proceeds will also be revenue in nature if the crypto assets are held as trading stock, or capital in nature if it is acquired for purposes of holding the crypto assets as an investment.

Where a taxpayer trades in crypto assets, the crypto assets will be treated as trading stock. The proceeds on disposal of the crypto asset will be gross income. Expenses associated with crypto assets can be claimed as a tax deduction provided that the requirements of s 11(a) of the Income Tax Act 58 of 1962 have been met. The tax implications as set out in s 22 of the Income Tax Act 58 of 1962 dealing with trading stock will apply to such crypto assets

If the crypto assets are held as capital assets, capital gains tax in terms of the Eighth Schedule will be payable on the disposal of such crypto assets and the cost of acquisition will form part of the base cost.

The onus ultimately rests with the taxpayer to declare all crypto asset related taxable income in the year in which it accrues or is received (SARS, 2021b).

CHAPTER 3: TAXATION OF CRYPTO ASSETS IN CERTAIN COUNTRIES IN COMPARISON TO THE TAX TREATMENT IN SOUTH AFRICA

3.1. Introduction

As in South Africa (SARS, 2021a), the national laws of the United States of America and Australia do not have separate statutes regulating the taxation of crypto asset transactions. The tax treatment in these countries is instead based on guidance issued by their respective tax revenue authorities. In the United States of America, it is the IRS, in Australia, it is the ATO and in South Africa, it is SARS.

In order to answer the research question, the tax treatment of crypto asset transactions are analysed in Australia and the United States of America and compared to the tax treatment of crypto asset transactions in South Africa. These countries are selected because they are similar to South Africa as they have residence-based income tax regimes (ATO, 2021c). Their tax authorities have provided significant guidelines in relation to the income taxation of crypto asset transactions. These guidelines are useful for comparative purposes in order to identify challenges within the tax treatments of crypto asset transactions in South Africa and how they can be remedied.

Australia and the United States of America have also been selected for this research report because they have more advanced regulations in relation to crypto assets and a higher prevalence of crypto asset transactions than South Africa.

The tax treatment of the following crypto asset transactions will be analysed:

- Crypto asset transaction 1 – The mining of crypto assets.
- Crypto asset transaction 2 – Crypto assets exchanged for fiat currency.
- Crypto asset transaction 3 – Barter transactions: goods or services exchanged for crypto assets.

In this chapter, the recent guidance and guidelines issued by the ATO and IRS will also be analysed.

3.2. Guidance issued by the Australian Taxation Office on the taxation of crypto assets in Australia

The main acts for income tax in Australia are the Income Tax Assessment Act 1936 and the Income Tax Assessment Act 1997. The tax regulations relating to crypto assets are not specifically addressed in the Australian income tax legislation (ATO, 2020a). Therefore, when analysing the tax implications of crypto asset transactions, reliance should be placed on the guidance issued by the ATO.

Such guidance includes the general guide on the income tax treatment of crypto assets in transactions and business (ATO, 2020a). Any guidance provided on the ATO's website is generally non-binding. However, taxation determinations and private rulings issued by the ATO are binding (Schmidt et al., 2021).

The general guidance issued by the ATO reflects the tax treatment of crypto assets held for investment purposes and where the crypto asset is held in the course of carrying on a business. Where the crypto asset is held in the course of carrying on a business, the proceeds from the disposal of any crypto asset are treated as ordinary income, and the cost of acquiring any crypto asset is deductible. Section 6-5(1) of the Income Tax Assessment Act 1997 states that ordinary income is 'income according to ordinary concepts'. Where the crypto assets have been held for investment purposes, the disposal of the crypto asset would trigger capital gains tax (ATO, 2020a.)

In 2014, the ATO (ATO, 2020a) provided a set of initial guidelines to address the primary tax implications of Bitcoin and crypto assets, including goods and services tax implications in transactions. In summary, the position of the ATO is that crypto assets such as Bitcoin are neither money nor a foreign currency, but they are treated as an asset for the purpose of capital gains tax.

The ATO released Taxation Determinations that outline the Commissioner's position on the taxation of Bitcoin:

- TD 2014/25: Income Tax: is Bitcoin a foreign currency for purposes of Division 775 of the Income Tax Assessment Act 1997? (ATO, 2014a).

- TD 2014/26: Income Tax: is Bitcoin a CGT asset for the purposes of subsection 108-5(1) of the Income Tax Assessment Act 1997? (ATO, 2014b).
- TD 2014/27: Income Tax: is Bitcoin trading stock for the purposes of subsection 70-10(1) of the Income Tax Assessment Act 1997? (ATO, 2014c).

The ATO also issued private rulings in relation to the tax treatment of crypto assets. A private ruling is a binding advice that sets out how a tax law applies to a taxpayer in relation to a specific scheme or circumstance. Although private rulings are only binding to the particular taxpayer who applies for them, private rulings can be used as useful guidance for the tax treatment of crypto asset transactions (ATO, 2020d.)

The ATO has an online forum called the ‘ATO Community’ where taxpayers can discuss a range of tax issues which would include the taxation of crypto assets. The views expressed on the online forum by the ATO representative are not binding on the ATO (ATO, 2021b.)

3.2.1. Income and Capital Gains Taxes

For Australian capital gains tax purposes, crypto assets are CGT assets. Section 108-5 of the Income Tax Act 1997 defines CGT assets as any kind of property or any legal or equitable right that is not property. In terms of Taxation Determination 2014/26, crypto assets consist of a bundle of rights and are, effectively, a digital representation of value. The conclusion is based on the fact that:

- the crypto asset has a value attached to it;
- the crypto asset is used to transact;
- the owner of a crypto asset can exclude others from accessing/using that crypto asset; and
- the crypto asset can change ownership.

Owing to the above, a crypto asset would meet the definition of personal property³ which would be classified as a CGT asset.

Per the ATO, a capital gain or loss is the difference between the (ATO, 2020a):

³ *National Provincial Bank Ltd v. Ainsworth* [1965] AC 1175

- ‘cost base (cost of ownership, including the purchase price plus certain other costs associated with acquiring, holding and disposing of it)
- capital proceeds (what you receive or the market value of what you receive) when you dispose of your cryptocurrency.’

In certain cases, the crypto asset may have revenue tax consequences. This will be the case where the crypto asset is held at revenue account where the crypto asset is used in a profit-making venture or as trading stock.

The sections below discuss the different classifications of crypto assets:

1. Capital asset

Assets that are held for long-term investments on capital account are subject to Australia’s capital gains tax regime in terms of Division 100 of the Income Tax Assessment Act 1997. These crypto assets would be retained for a significant period of time as a long-term store of value or with an expectation of capital appreciation over a longer term (Schmidt et al., 2021).

2. Revenue asset

Crypto assets will be revenue account assets where they are used with the intention to make a profit. A profit-making venture can even exist even if the crypto asset is held for a significant period of time (Schmidt et al., 2021).

The ATO (ATO, 2020a) has issued factors that it considers relevant for determining whether a transaction is in a profit-making venture:

- ‘the nature of the entity undertaking the transaction;
- the nature and scale of other activities undertaken by the entity;
- the amount of money involved and the scale of the profit sought or obtained;
- the nature, scale and complexity of the transaction;
- the length of time over which the transaction occurs; and
- whether the property, in this case the crypto asset, had any other use other than as an object of trade (for example, [if it is] used as a medium of exchange or to buy services only available on the blockchain).’

The ATO (ATO, 2020a) gives an example of crypto assets being a revenue account asset in the following circumstances:

- 'The taxpayer is employed or engaged in a profession other than full-time crypto trading and undertakes crypto trading as a side project.
- The taxpayer has identified an arbitrage opportunity involving multiple crypto asset pairs. To take advantage of this opportunity, the taxpayer has also developed strategies to reduce the risk of losses, including fast response programmes to adjust for events occurring during the series of transactions and offsetting option arrangements.
- To maximize profits from the transactions, the taxpayer undertakes back-to back transactions on the same day.'

3. Personal use asset

Section 108-20 of the Income Tax Assessment Act 1997 states that personal use assets are assets (other than collectables) that are used or kept mainly for the personal use or enjoyment of the taxpayer or the taxpayer's associates. Section 118-10 of the Income Tax Assessment Act 1997 states that capital gains that are made on the sale of personal use assets are disregarded if the asset was originally acquired for less than AUD\$10 000. However, all capital losses made on personal use assets are disregarded (ATO, 2020a).

A crypto asset is a personal use asset if it is kept or used mainly to purchase items for personal use or consumption. In terms of the ATO (ATO, 2020a), a crypto asset is not a personal use asset if it is kept or used mainly:

- 'as an investment,
- in a profit-making scheme, or
- in the course of carrying on a business.'

Where a crypto asset is acquired and used within a short period of time to acquire items for personal use or consumption, the crypto asset is more likely to be a personal use asset (ATO, 2020a)

4. Trading stock

Taxation Determination 2014/27 (ATO, 2014c) was issued by the ATO in 2014 and answers the question of whether Bitcoin and other similar crypto assets are trading stock for the purposes of subsection 70-10(1) of the Income Tax Assessment Act 1997.

The term ‘trading stock’ is defined in subsection 70-10(1) of the Income Tax Assessment Act 1997 as:

- ‘(a) anything produced, manufactured or acquired that is held for the purposes of manufacture, sale or exchange in the ordinary course of a business; and
- (b) livestock.’

Taxation Determination 2014/27 (ATO, 2014c) states:

‘The term ‘anything’ is not defined in the Income Tax Assessment Act 1997 and therefore takes its ordinary meaning taking into account the legislative context in which the term is used. According to the Macquarie Dictionary, ‘anything’ means ‘anything whatever; something, no matter what; a thing of any kind’. The Commissioner considers the ordinary meaning of the term ‘anything’; when considered in its legislative context, however, the term has a narrower meaning than the dictionary definition of the term.’

Accordingly, as the crypto asset is property for tax purposes, it is ‘trading stock’ for the purposes of subsection 70-10(1) where it is held for the purpose of sale or exchange in the ordinary course of a business.

In terms of *Taxation Determination 2014/27 (ATO, 2014c)* crypto assets held by a taxpayer carrying on a business of mining and selling crypto assets or a taxpayer carrying on a crypto asset exchange business will be considered to be trading stock. Further, crypto assets received as a method of payment by any business that sells goods will be considered to be trading stock of that business where the crypto asset is held for the purposes of sale or exchange in the ordinary course of the business.

3.3. Guidance issued by the Internal Revenue Service on the taxation of crypto assets in the United States of America

The Internal Revenue Code of 1986 is the legislation governing the federal tax law of the United States of America. The Code defines the scope and operation of the entire tax system in the United States of America, which is administered by the IRS.

Official tax reporting guidance for crypto assets is found in the IRS’s *Notice 2014-21* (IRS, 2014b). *Notice 2014-21* (IRS, 2014b) is in the form of Frequently Asked Questions and Answers that ‘describe how existing tax principles apply to transactions using virtual

currency’ (Wilwerding, 2019:10). Fuerst et al. (2014) stated that notices such as Notice 2014-21 (IRS, 2014b) issued by the IRS are public pronouncements that allow the IRS to state a position without having to issue a Revenue Ruling and as such, Notices issued by the IRS do not have the force and effect of law and do not bind courts.

The IRS also issued two important releases addressing tax questions related to virtual currency sold, exchanged, or received by taxpayers. These releases are *Revenue Ruling 2019-24* (IRS, 2019b) regarding the tax consequences of hard forks, and *Frequently Asked Questions on Virtual Currency Transactions* (IRS, 2019a).

Revenue Ruling 2019-24 (IRS, 2019b:2) defines a hard fork as:

‘A hard fork is unique to distributed ledger technology and occurs when a cryptocurrency on a distributed ledger undergoes a protocol change resulting in a permanent diversion from the legacy or existing distributed ledger. A hard fork may result in the creation of a new cryptocurrency on a new distributed ledger in addition to the legacy cryptocurrency on the legacy distributed ledger.’

The IRS uses the term ‘Virtual Currency’ in its Taxation *Notice 2014-21* (IRS, 2014b:1). Virtual currency can be used to pay for goods and services, traded on a trading platform or converted to fiat currency.

3.3.1. Income and Capital Gains Taxes

Notice 2014-21 (IRS, 2014b:2) states:

‘For federal tax purposes, virtual currency is treated as property. General tax principles applicable to property transactions apply to transactions using virtual currency.’

Therefore, in understanding *Notice 2014-21* (IRS, 2014b:2) issued by the IRS to treat virtual currencies as property, it is important to understand how property tax is applied in the USA as transactions related to crypto assets are treated as property events under the IRS.

Publication 544 (IRS, 2022) issued by the IRS provides guidance on the tax treatment of property transactions in the USA. In terms of *Publication 544* (IRS, 2022), ‘[c]alculating the realized gain or loss’ is required when determining the gains and losses from the invested property.

Publication 544 (IRS, 2022:3) states:

‘You usually realize gain or loss when property is sold or exchanged. A gain is the amount you realize from a sale or exchange of property that is more than its adjusted basis. A loss occurs when the adjusted basis of the property is more than the amount you realize on the sale or exchange.’

In calculating a realized gain or loss from a crypto asset transaction, the starting point is knowing the initial cost, also known as a ‘basis’. The ‘basis’, according to *Publication 544* (IRS, 2022:3), would include the payment for the crypto asset in cash, debt obligations or other property or services to purchase the crypto asset.

In certain cases, if upon acquiring the crypto asset as an adjustment to the basis or initial cost to the crypto asset is required, this will have a subsequent effect on the gain or loss that is realised on the invested crypto asset, which is known as an ‘adjusted basis’.

‘Amount realised’ (IRS, 2022:3) is defined in the following terms:

‘The amount you realize from a sale or exchange is the total of all the money you receive plus the fair market value (defined below) of all property or services you receive. The amount you realize also includes any of your liabilities that were assumed by the buyer and any liabilities to which the property you transferred is subject, such as real estate taxes or a mortgage.’

When determining a gain from the ‘amount realised’, the amount from the sale should be greater than the basis including the adjusted basis of the crypto asset. This would also apply to losses incurred where the ‘amount realised’ is less than the basis or initial cost and the adjusted basis of the crypto asset (IRS, 2022:3.)

3.3.1.1. Determining the recognized portion of the gain or loss

‘Amount recognised’ (IRS, 2022:4) is defined as:

‘Your gain or loss realized from a sale or exchange of property is usually a recognized gain or loss for tax purposes. This includes a gain or loss realized from a sale or exchange of a portion of a MACRS asset. Recognized gains must be included in gross income. Recognized losses are deductible from gross income. However, your gain or loss realized from certain exchanges of property is not recognized for tax purposes. See Nontaxable Exchanges, later. Also, a loss from the sale or other disposition of property held for personal use is not deductible, except in the case of a casualty or theft loss.’

Upon determining the gain or loss, the next step is ‘recognition.’. In this phase, it must be determined whether the portions of either the gains or losses are recognizable, and this is a requirement that must be met for tax purposes (IRS, 2022:4)

3.3.1.2. Characterisation of the recognized gain or loss as ordinary, capital, or property in terms of s 1231 of the Internal Revenue Code of 1986

In terms of *Publication 544* (IRS, 2022:19),

‘You must classify your gains and losses as either ordinary or capital, and your capital gains or losses as either short term or long term. You must do this to figure your net capital gain or loss.’

Therefore, gains or losses that are recognized are categorized as ordinary, capital or s 1231 gains or losses. When characterizing gains or losses in a crypto asset transaction, the nature of the assets sold, and the time period of usage and keeping of that property or asset, should be considered (IRS, 2022).

Publication 544 (IRS, 2022:20) states that almost everything that is owned by the taxpayer for personal purposes, pleasure or investment is a capital asset. Some examples of noncapital assets include, but are not limited to:

‘Stock in trade, inventory, and other property you hold mainly for sale to customers in your trade or business. Depreciable property used in your trade or business or as rental property. Real property used in your trade or business’

Section 1231 (IRS, 2022:18) transactions are

‘sales and exchanges of real or depreciable property held longer than 1 year and used in a trade or business. They also include certain involuntary conversions of business or investment property, including capital assets.’

3.4. Crypto asset transaction 1: Mining of crypto assets

The tax implications of mining crypto assets in Australia, the United States of America and South Africa are discussed below.

3.4.1. Australia

The income tax implications of mining crypto assets will depend on whether the mining activities involve the carrying on of a business (Schmidt et al., 2021).

Paragraph 14 of *Taxation Determination TD 2014/27* (ATO, 2014c) clarifies this further as follows:

‘Bitcoin held by a taxpayer carrying on a business of mining and selling bitcoin, or a taxpayer carrying on a Bitcoin exchange business will be considered to be trading stock. Further bitcoin

received as a method of payment by any business that sells goods will also be considered to be trading stock of that business where the bitcoin is held for the purposes of sale or exchange in the ordinary course of the business.’

Where the taxpayer is in the business of mining crypto assets, a crypto asset acquired is treated as trading stock. The value of the mined crypto asset is not included in assessable income upfront upon acquisition of the crypto asset. The profit derived from the disposal of the mined crypto asset to a third party is included in assessable income (ATO, 2020a.)

Any increase in the total value of the mined crypto asset that is not sold at the end of the year is treated as assessable income. Any decrease in the value of the crypto asset at the end of the year is treated as an allowable deduction. Any expenses incurred in respect of the mining activity are deductible against other income. The cost of capital assets, which would include hardware and software, is depreciated over the useful life of the capital asset and claimed as allowances (Schmidt et al., 2021.)

The ATO (2018) defines assessable income as any amount that is:

‘ordinary income (income from rendering personal services, income from property and income from carrying on trading activities), an amount specified under income tax law as income and not an amount specified under income tax law as exempt income or non-assessable, non-exempt income. Assessable income includes receipts from trading with non-members and income from sources outside the organisation.’

Assessable income in terms of subsection 6-5(2) of the Income Tax Assessment Act 1997 in Australia is equivalent to gross income as per s 1(1) of the Income Tax Act 58 of 1962 in South Africa.

It should be noted that not all taxpayers acquiring and disposing of crypto assets will carry on a business. The ATO (ATO, 2020a) gives guidance as to when a taxpayer will be carrying on a business:

- carrying on an activity for commercial reasons and in a commercially viable way;
- undertaking activities in a business-like manner which would typically include preparing a business plan and acquiring capital assets or inventory in line with the business plan;
- preparing accounting records and marketing a business name or product; or

- intending to make a profit or genuinely believing that a profit will be made in the future.

3.4.2. The United States of America

The mining of crypto assets in the USA uses the proof-of-work validation technique which is verified by miners. The miners solve complex mathematical problems and are awarded crypto assets for successful mining or are paid a transaction fee in crypto assets. Taxpayers who mine crypto assets are considered to receive crypto assets in exchange for providing a service (Schmidt et al., 2021).

Notice 2014-21 (IRS, 2014b:2-3) stipulates that a taxpayer who mines virtual currency ought to include the fair market value of the virtual currency received in gross income as of the date of receipt. The Internal Revenue Code of 1986 defines gross income as ‘all income from whatever source derived...’.

Notice 2014-21 (IRS, 2014b:4) states that if the mining of crypto assets is carried on as a trade or business and the miner is not undertaking the mining activity as an employee, any profits from the mining of crypto assets (net of allowable business expense deductions) constitute self-employment income, which is subject to self-employment tax. The IRS defines self-employment tax as consisting of Social Security and Medicare taxes primarily for individuals who work for themselves (IRS, 2022.)

The taxpayer can deduct fees and expenses (e.g., electricity or home office) incurred in connection with the mining of crypto assets and claim capital allowances with respect to computer equipment and software (Schmidt et al., 2021).

Notice 2014-21 (IRS, 2014b:4) further states that if a taxpayer conducts mining activities as an employee, the value of the crypto assets received is considered remuneration. The remuneration would be subject to federal income tax withholding by employers as well as employment taxes.

3.5. Crypto asset transaction 2: Crypto assets exchanged for fiat currency

3.5.1. Australia

If crypto assets are exchanged for fiat currency, the tax implications will depend on the classification of the crypto asset (Schmidt et al., 2021).

Capital asset

Where the crypto asset is held as an investment, a capital gain can arise upon the disposal of the crypto asset. A capital gain is made if the capital proceeds from the disposal of the crypto asset are more than its cost base. The taxpayer will be eligible for a capital gains tax discount of 50% on the capital gain upon disposal where the crypto asset is held by an individual or through a trust for at least 12 months. Capital losses will be used to reduce future capital gains on disposals of crypto assets (ATO, 2020a)

Revenue account asset

Where the crypto asset has been exchanged for fiat currency, any net profit (gross income less allowable expenses) will be taxed as ordinary income in terms of s 6-5 of Income Tax Assessment Act 1997. The net profit cannot be reduced by the capital gains tax discount for assets held for at least 12 months prior to the disposal. A net loss is deductible to the taxpayer in terms of s 8-1 of Income Tax Assessment Act 1997.

Trading stock

The proceeds from the sale of the crypto asset which has been classified as trading stock are included in the assessable income of a taxpayer and the expenses incurred in carrying on the business are allowed as a deduction in terms of s 70-35 of Income Tax Assessment Act 1997.

The taxpayer carrying on a business should compare the opening balance of the crypto asset held as trading stock with the closing balance of crypto assets held as trading stock at the end of the year in terms of s 70-25(1) of the Income Tax Assessment Act 1997. Where the closing balance exceeds the opening balance of the crypto asset, the excess is

included in assessable income in terms of s 70-25(2) of the Income Tax Assessment Act 1997. If the opening balance exceeds the closing balance, then the excess is deductible by the taxpayer in terms of s 70-25(3) of the Income Tax Assessment Act 1997.

Personal use assets

Capital gains that are made on the sale of personal use assets are disregarded provided the crypto asset was acquired for less than AUD 10,000 taxpayer in terms of s 118-10 of the Income Tax Assessment Act 1997.

3.5.2. The United States of America

In terms of the *Frequently Asked Questions on Virtual Currency* (IRS. 2019b) issued by the IRS, selling crypto assets for fiat currency will be a realization event giving rise to taxable gain or loss. The taxability of the gain or loss is dependent on whether the crypto asset is a capital asset in the hands of the taxpayer. A taxpayer would realise a capital gain or loss on the sale or exchange of a crypto asset that is a capital asset in the hands of the taxpayer.

Capital asset

Any gain or loss realised on the sale or exchange of a crypto asset treated as a capital asset is regarded as a long-term capital gain or loss when the crypto asset has been held for longer than one year, or a short-term capital gain or loss when the crypto asset has been held for less than one year, as stated in the *Frequently Asked Questions on Virtual Currency*.

Long-term and short-term capital gains and losses are treated as follows for tax purposes:

- For individual taxpayers, a long-term capital gain is taxed at preferential rates in terms of s 1411 of the Internal Revenue Code of 1986. A short-term capital gain is taxed at ordinary income rates in terms of s 1(a), (j) of the Internal Revenue Code of 1986. Capital losses are deductible to the extent of capital gains; plus, individuals may deduct up to USD 3,000 of net capital losses in terms of s 1211(b) of the Internal Revenue Code of 1986.

- Companies pay the same marginal rate of tax on ordinary or capital gains. Net capital losses incurred by companies cannot be currently deducted in terms of s 1211(a) of the Internal Revenue Code of 1986. Instead, net capital losses are carried back for three taxable years and carried forward for ten taxable years in terms of s 1212(a) of the Internal Revenue Code of 1986.

3.6. Crypto asset transaction 3: Crypto assets exchanged for crypto assets and crypto assets exchanged for goods and services

3.6.1. Australia

The exchange of one crypto asset for another is likely to give rise to Australian tax implications (ATO, 2020a). The implications will depend on the circumstances giving rise to the exchange.

Capital asset

Where the crypto asset is a capital asset, the exchange will be subject to the CGT rules in terms of Division 100 of the Income Tax Assessment Act of 1997. The market value of the replacement crypto asset will need to be determined in Australian dollars on the date of exchange. A capital gain will arise where the market value of the replacement crypto asset exceeds the cost base of the crypto asset disposed of.

Capital losses will arise where the value of the replacement crypto asset is less than the reduced cost base of the original crypto asset disposed of in terms of 104-10 of the Income Tax Assessment Act of 1997.

A capital gain is eligible for a discount of up to 50% where the original crypto asset has been held by an individual or trust for at least twelve months prior to disposal in terms of s 115-1 of the Income Tax Assessment Act of 1997.

Revenue account asset

If the crypto asset is a revenue account asset (as opposed to being a capital asset), then the net profit will be taxed as ordinary income in terms of s 6-5 of Income Tax Assessment Act.

A merchant receiving payment in crypto assets for goods or services rendered

The service provider will need to include the value of the crypto assets in Australian dollars as part of their ordinary income where the service provider receives crypto assets as payment for goods or services that the service provider provides as part of their business (ATO, 2020a.)

The value of the crypto asset in Australian Dollars is the fair market value which can be obtained from a reputable crypto exchange (ATO, 2020a).

When the service provider exchanges the crypto assets received into fiat currency, the tax treatment will depend on whether the service provider held the crypto asset as a capital asset, revenue account asset or trading stock.

3.6.2. The United States of America

For federal tax purposes in the United States of America, crypto assets are treated as property, therefore, when a taxpayer exchanges one crypto asset for another crypto asset, the taxpayer is engaged in both an acquisition and a disposition. Therefore, the taxpayer would recognise a gain or loss which is equal to the difference between the fair market value of the crypto asset received and the taxpayer's adjusted basis in the crypto asset disposed of. In addition, the acquired crypto asset may generate a taxable gain or loss upon a later disposition to the extent of any future appreciation or depreciation (IRS, 2014b:2-5).

A merchant receiving payment in crypto assets for goods or services rendered

A service provider who receives payment in crypto assets for goods or services must include the fair market value of the crypto assets, measured in US dollars when received.

3.7. Conclusion

SARS issued a media statement on 6 April 2018 (SARS, 2018) providing its view on the income tax consequences of crypto asset transactions. In it, SARS indicated that it does not consider cryptocurrency to be ‘currency’ for income tax purposes since it is not legal tender, nor is it widely accepted. Rather, it views cryptocurrency to be an intangible asset (SARS, 2018). Sars’s view is consistent with that of Australia (ATO, 2020a) and the United States of America (*Notice 2014-21* (IRS, 2014b:2)), where crypto assets are classified as ‘property’.

SARS identifies three types of transactions involving crypto assets. Crypto assets can be acquired through mining, exchanged for goods and services, and purchased or sold in exchange for local currencies.

SARS considers mining activities to be revenue in nature and the resultant crypto asset to be trading stock (SARS, 2018). This is coherent with the Australian approach, although the advice of the ATO is that this is dependent on whether or not mining represents the carrying on of a business by the taxpayer (ATO, 2020). The IRS requires consideration of whether or not mining constitutes a trade or business of the taxpayer as mentioned in.

According to the IRS, exchanging one type of crypto asset for another crypto asset is considered a taxable event because the crypto asset is being sold, thus generating capital gains or losses. When converting a crypto asset to U.S. dollars or another fiat currency at a gain would be a taxable event because it is treated as having been disposed of, thus generating capital gains, as stated in *Notice 2014-21* (IRS, 2014b:3).

The ATO (ATO, 2020) provides that where a crypto asset is not held for speculative purposes, any gains realised on the disposal of the crypto asset would give rise to capital gains tax.

The table below presents the comparison of the tax implications of the crypto asset transaction in Australia, South Africa, and the United States of America.

Table 1: Income tax consequences of crypto asset transactions

No.	Crypto asset transactions identified	United States of America (IRS)	Australia (ATO)	South Africa (SARS)
1	Classification of crypto assets	Property	Property/CGT Assets	Assets
2	Crypto asset transaction 1: Mining of crypto assets	<p>Ordinary income at the fair value of the crypto asset if the mining of crypto assets is carried on as a trade or business and the miner is not undertaking the mining activity as an employee.</p> <p>If a taxpayer conducts mining activities as an employee, the value of the crypto assets received is considered remuneration.</p>	<p>Ordinary income at the fair value of the crypto asset if the crypto asset is held as trading where the mining activities involve the carrying on of a business</p> <p>Capital gains tax will apply where the crypto asset is not held as trading stock and where the mining activities involve the carrying on of a business</p>	<p>Gross income at the fair value of the crypto asset. The rewards of a crypto asset are held as trading stock until it is exchanged for either another crypto asset or fiat currency where the crypto asset is classified as trading stock in respect of which a trade is carried on.</p>

No.	Crypto asset transactions identified	United States of America (IRS)	Australia (ATO)	South Africa (SARS)
3	Crypto asset transaction 2: Crypto assets exchanged for fiat currency	<p>The taxability of the gain or loss is dependent on whether the crypto asset is a capital asset in the hands of the taxpayer.</p> <p>Therefore capital gains tax applies if the crypto asset is held as a capital asset, and will be included in gross income if the crypto asset is held as trading stock.</p>	<p>The tax implications will depend on the classification of the crypto asset.</p> <p>Capital gains tax will apply where the crypto asset is held on capital account.</p> <p>If the crypto asset is held as trading stock, trading stock rules apply.</p> <p>If the crypto asset is held on a revenue account, any net profit will be taxable as ordinary income.</p>	<p>Capital gain tax applies if the crypto asset is held as a capital asset and will be included in gross income if the crypto asset is held as trading stock or on revenue account.</p> <p>If the crypto asset is held as trading stock, trading stock rules will apply</p>
ii	Crypto asset transaction 3: Crypto assets exchanged for crypto assets	<p>The taxability of the gain or loss is dependent on whether the crypto asset is a capital asset in the hands of the taxpayer.</p>	<p>The tax implications will depend on the classification of the crypto asset.</p> <p>Capital gains tax will apply where the crypto asset is held on capital account.</p>	<p>Capital gain tax applies if the crypto asset is held as a capital asset and gross income rules will apply, if the crypto asset is held as trading stock or on revenue account.</p>

No.	Crypto asset transactions identified	United States of America (IRS)	Australia (ATO)	South Africa (SARS)
		Therefore, capital gains tax applies if held as a capital asset, and gross income if held as trading stock.	If the crypto asset is held as trading stock, trading stock rules apply. If the crypto asset is held on revenue account, any net profit will be taxable as ordinary income.	If the crypto asset is held as trading stock, trading stock rules will apply.
4	Crypto asset transaction 3: Crypto assets exchanged for goods and services.	Ordinary income at the fair value of the crypto asset.	Ordinary income at the fair value of the crypto asset.	Gross income at the fair value of the crypto asset received.

CHAPTER 4: RECOMMENDATIONS FOR THE TAXATION OF CRYPTO ASSET TRANSACTIONS IN SOUTH AFRICA

4.1. Introduction

The digitalisation of the economy has enabled substantial changes in the way business is conducted, how businesses are structured, and how the business creates value. Crypto assets pose challenges for taxation policymakers in South Africa. This chapter discusses the challenges and provides recommendations when applying the tax treatment of crypto asset transactions in South Africa.

4.2. Inadequacies identified in the South African taxation system in relation to crypto asset transactions

4.2.1. Valuation of crypto assets

The price of crypto assets fluctuates significantly. Such a high level of volatility makes valuation complex. The valuation of crypto assets is key for the calculation of overall gross income and capital gains tax impact of crypto asset transactions (OECD, 2020:41).

There would be practical difficulties due to the high fluctuation of crypto assets that records may not be kept with the necessary precision, and exchange platforms may have different prices for the same crypto asset. The valuation of crypto assets relies on complex records of purchase and disposal prices, and it may prove challenging for taxpayers to keep pricing information over a long-time period (Organisation for Economic Co-operation and Development [OECD], 2020:43.)

From a tax perspective, the valuation of a crypto asset is important on the receipt of a new crypto asset, whether via mining or when received in a barter transaction, in order to calculate the applicable income tax consequence on the crypto asset transaction (OECD, 2020:41). Therefore, accurate record keeping of purchase dates and values of a crypto asset is important as are records of their acquisition and disposal values.

For instance, in terms of *the Frequently Asked Questions on Virtual Currency Transactions* (IRS, 2019a) issued by the IRS, the taxpayer is required to specifically indicate the basis and holding period of the units involved in the transaction, otherwise, the crypto asset is deemed to have been disposed of starting from the earliest unit purchased (FIFO approach).

Notice 2014-21 (IRS, 2014b:3) issued by the IRS provides guidance regarding the valuation of crypto assets. It provides that:

‘if a virtual currency is listed on an exchange and the exchange rate is established by market supply and demand, the fair market value of the virtual currency is determined by converting the virtual currency into U.S. dollars (or into another real currency which in turn can be converted into U.S. dollars) at the exchange rate, in a reasonable manner that is consistently applied.’

SARS has not provided guidance on the valuation of crypto assets for taxation purposes.

4.2.2. Guidance on other crypto asset transactions

SARS has not provided any guidance on the tax treatment of crypto assets in the event of donation of crypto assets, inheritance of crypto assets, or their theft or loss thereof. The guidance provided by SARS (SARS, 2018) is limited to the following crypto asset transactions:

(i) A cryptocurrency can be acquired through so called ‘mining’. Mining is conducted by the verification of transactions in a computer-generated public ledger, achieved through the solving of complex computer algorithms. By verifying these transactions, the ‘miner’ is rewarded with ownership of new coins which become part of the networked ledger.

This gives rise to an immediate accrual or receipt on successful mining of the cryptocurrency. This means that until the newly acquired cryptocurrency is sold or exchanged for cash, it is held as trading stock which can subsequently be realized through either a normal cash transaction (as described in (ii) or a barter transaction as described in (iii) below.

(ii) Investors can exchange local currency for a cryptocurrency (or vice versa) by using cryptocurrency exchanges, which are essentially markets for cryptocurrencies, or through private transactions.

(iii) Goods or services can be exchanged for cryptocurrencies. This transaction is regarded as a barter transaction. Therefore, the normal barter transaction rules apply.’

Therefore, guidance issued by SARS (SARS, 2018) is limited as it only identifies three types of transactions involving crypto assets. Crypto assets are acquired through ‘mining’,

exchanged for goods and services and purchased or sold in exchange for fiat currencies.

The IRS through *Notice 2014-21* (IRS, 2014b), *Revenue Ruling 2019-24* (IRS, 2019b) and *Frequently Asked Questions on Virtual Currency Transactions* (IRS, 2019a) and the ATO (ATO, 2020a) have also considered the tax implications of the following:

- Blockchain hard fork, resulting in a new crypto asset over and above the original;
- Receiving an airdrop of a crypto asset (marketing or advertising campaign);
- Making (as opposed to receiving) salary payments in crypto assets;
- Donating crypto assets to another person, including to charity; and
- Initial coin offerings, which is the sale of a new crypto asset made to the market.

Revenue Ruling 2019-24 (IRS, 2019b) defines an airdrop as:

‘An airdrop is a means of distributing units of a cryptocurrency to the distributed ledger addresses of multiple taxpayers. A hard fork followed by an airdrop results in the distribution of units of the new cryptocurrency to addresses containing the legacy cryptocurrency’

Therefore, the guidance issued by SARS (SARS, 2018) does not sufficiently address the various business uses of crypto asset transactions as compared to the ATO and the IRS. The SARS guidelines (SARS, 2018) also lacked worked examples, which is included in the guidance provided by the ATO (ATO, 2020a) and the IRS (IRS, 2014b).

4.3. Key recommendation for the taxation of crypto asset transactions in South Africa

There is a major risk that the tax base can be eroded due to uncertainty of applicable tax treatments as there are no formal guidance papers, interpretation notes, and proper rulings on the tax treatment of crypto asset transactions issued by SARS

This section will present key recommendations in relation to the challenges identified in the tax treatment of crypto asset transactions.

4.3.1. Additional guidance to be issued by SARS

SARS is advised to provide the taxpayer with a formal interpretation note or a comprehensive guide in relation to the tax treatment of crypto asset transactions with a key focus on:

- where crypto assets are mined as a form of trade: guidelines should be considered on the valuation of the crypto asset held as trading stock;
- tax treatment of hard forks of crypto assets;
- tax treatment of airdrops;
- tax treatment of crypto assets where the crypto asset is donated
- clarity on permissible deductions where the taxpayer acquires the crypto asset through crypto asset mining.

The findings of this research report support the conclusion that the existing guidance issued by SARS, in the form of a media statement, is limited in scope in comparison to the tax guidelines of the ATO and IRS. The guidance issued by SARS would be insufficient to assist taxpayers in correctly determining the income tax consequences of a range of crypto asset transactions.

It is therefore recommended that SARS provide more comprehensive guidance on the income tax consequences of crypto asset transactions. The inclusion of references to the Income Tax Act 58 of 1962, as well as examples of the income tax implications, will assist taxpayers in determining the tax consequences of crypto asset transactions.

SARS should consider how the valuation of crypto assets should be carried out and who should be responsible for calculation and record keeping.

It is recommended that a list of the recognised stock exchanges be Gazetted to include crypto asset exchanges since paragraph 31(a) of the Eighth Schedule of the Income Tax Act 58 of 1962 stipulates that the market value of a financial instrument is the ruling price listed on a recognised exchange.

This inclusion would be in line with the draft regulation by the Financial Sector Conduct Authority, which requires a cryptocurrency exchange to be listed as a financial services provider (FSCA, 2020).

CHAPTER 5: CONCLUSION

This research report aimed to identify the inadequacies in the South African tax legislation in respect of crypto asset transactions as well as the possible remedies for these. The remedies as noted in chapter 4 have been identified from a comparison with the legislation and guidance issued by the ATO and IRS performed in chapter 3.

The main objectives of this research report are to understand the concept of crypto assets, investigate the current guidance provided by SARS in relation to the tax treatment of crypto asset transactions, and investigate the guidance issued by the ATO and IRS in relation to the taxation of crypto asset transactions in order to identify inadequacies in the guidance provided by SARS. The aim is to develop recommendations to mitigate the inadequacies identified.

In understanding the concept of crypto assets, it was established that crypto assets are convertible, decentralised virtual currencies based on cryptographic algorithms (Härdle et al. (2019:4). They do not have a central monitoring authority. It was also recognised that crypto assets use blockchain technology that records all the transactions made on the digital ledger network (Crosby et al., 2016:8).

To date, SARS has not issued a formal interpretation note or a comprehensive guide on the tax treatment of crypto asset transactions. In 2018, SARS issued a media release (SARS, 2018) to clarify its stance on the tax treatment of cryptocurrencies and issued a list of *Frequently Asked Questions on Crypto Assets* (SARS, 2021a). In August 2021, SARS provided further guidance on the taxation of crypto assets on their website. According to this guidance, normal income tax rules apply to crypto assets, and affected taxpayers must declare gains and losses from crypto assets as part of their taxable income (SARS, 2021b.)

It is submitted by the author of this research report that the inclusion of crypto assets to the definition of ‘financial instrument’ in s 1(1) of the Income Tax Act 58 of 1962 has fulfilled, to some extent, its purpose of clarifying the normal tax treatment of crypto assets.

The normal tax treatment of crypto asset transactions depends on whether the taxpayer holds crypto assets on revenue account (as trading stock) or on capital account (as a capital asset), as noted in chapter 2. Where the taxpayer holds the crypto asset on revenue account, any gains made on the crypto asset transaction would meet the gross income definition included in s 1(1) of the Income Tax Act 58 of 1962. Expenses incurred in the production of income in terms of s 11(a) and s 23(g) of the Income Tax Act 58 of 1962 can be deductible by the taxpayer. Section 22 is applicable where the crypto asset is held as trading stock. Where the taxpayer holds the crypto asset as a capital asset, the gains and losses on the disposal of the crypto asset gives rise to the capital gains tax implications in terms of the Eighth Schedule.

This research report considered the guidance in relation to the tax treatment of crypto asset transactions issued by the ATO and the IRS. The examination of guidance provided by the ATO and IRS aided in providing recommendation to the inadequacies identified in chapter 4.

The ATO issued *Tax Determination 2014/25* (ATO, 2014a) *Tax Determination 2014/26* (ATO, 2014b) and *Tax Determination 2014/27* (ATO, 2014c), which provide the taxpayer with guidance on the tax treatments of crypto assets. These taxation determinations were analysed in Chapter 3 of this research report.

In terms of the ATO (ATO, 2020a), crypto asset transactions have the same tax consequences as bartering transactions, as crypto assets are regarded as ‘property’ or CGT assets. Crypto assets are therefore not regarded as ‘money’, ‘currency’, or ‘foreign currency’. As mentioned in chapter 3.4.1, any gains or losses derived from mining crypto assets or exchanging crypto assets are regarded as ordinary income. However, as noted in chapters 3.5.1 and 3.6.1 where the intention of the taxpayer is to obtain crypto assets for investment purposes and then subsequently disposes of them, the gain or loss on the crypto asset transaction will be subject to capital gains tax

The IRS issued *Notice 2014-21* (IRS, 2014b), *Revenue Ruling 2019-24* (IRS, 2019b) and *Virtual Currency Frequently Asked Questions* (IRS, 2019a) which provide the taxpayer with guidance on the tax treatments of crypto assets. This guidance was analysed in Chapter 3.3.1 of this research report. Notice 2014-21 (IRS, 2014b:1) defines terms such

as ‘virtual currency’, which is ‘a digital representation of value that functions as a medium of exchange or a store of value’. In *Notice 2014-21* (IRS, 2014b:2), the IRS requires that crypto assets be taxed in the same way as traditional property.

It is concluded that SARS has not provided sufficient guidance through its media releases, user alerts, and amendments to the legislation as there is still uncertainty in the overall tax treatments of crypto-asset transactions. Key inadequacies and recommendations have been documented on the current taxation system of crypto assets in South Africa, which were discussed in chapter 4 of this research report. It is further noted that the existing guidance issued by SARS, in the form of a media statement, is limited in scope and insufficient to assist taxpayers to correctly determine the income tax consequences of a range of crypto asset transactions. It is recommended that SARS provide comprehensive guidance on the income tax consequences of crypto asset transactions.

REFERENCES

Books

Haupt, P., Haupt, E. and Haupt, K (2019). *Notes on South African income tax, 2019*. Roggebaai: H & H Publications.

Schmidt, N., Bernstein, J., Richter, S. & Zarlenga, L.M. 2021. *Taxation of crypto assets*. Alphen Aan Den Rijn: Kluwer Law International. [Online] Available at:
[https://books.google.co.za/books?id=A6UQEAAAQBAJ&pg=PT115&lpg=PT115&dq=%E2%80%A2+TD+2014/26:+Income+Tax:+is+Bitcoin+a+CGT+asset+for+the+purposes+of+subsection+1085\(1\)+of+the+Income+Tax+Assessment+Act+1997?&source=glkr6JI07z&sig=ACfU3U2mUumpqU8ZScwJpLonf8GlaQeQ&hl=en&sa=X&ved=2ahUKewiYkZeK8Lj0AhVZQkEAHX0XCcQQ6AF6BAgCEAM#v=onepage&q&f=false](https://books.google.co.za/books?id=A6UQEAAAQBAJ&pg=PT115&lpg=PT115&dq=%E2%80%A2+TD+2014/26:+Income+Tax:+is+Bitcoin+a+CGT+asset+for+the+purposes+of+subsection+1085(1)+of+the+Income+Tax+Assessment+Act+1997?&source=glkr6JI07z&sig=ACfU3U2mUumpqU8ZScwJpLonf8GlaQeQ&hl=en&sa=X&ved=2ahUKewiYkZeK8Lj0AhVZQkEAHX0XCcQQ6AF6BAgCEAM#v=onepage&q&f=false)
[Accessed: 05 December 2021].

Stiglingh M., Koekemoer, A.D., van Schalkwyk, L., Wilcocks, J.S., and de Swardt, R.D (2014). *Silke : South African income tax 2014*. Durban: Lexisnexis.

Case Law: South African Cases

Burgess v CIR, (1993) 55 SATC 185(A)

Caltex Oil (SA) Ltd v SIR (1975) 37 SATC 1

CIR v Delfos 1933 AD 242 6 SATC 92

CIR v Genn & Co (Pty) Ltd (1955) 20 SATC 113

CIR v George Forest Timber Co Ltd 1924 AD 516, 1 SATC 20

CIR v Golden Dumps (Pty) Ltd 1993 4 SA 110

CIR v Nel (1997) 59 SATC 349

CIR v People's Stores (Walvis Bay) (Pty) Ltd 1990 (2) SA353 (A), 52 SATC 9

CIR v Richmond Estates (Pty) Ltd 1956 (1) SA; 20 SATC 355

CSARS v Brummeria Renaissance (Pty) Ltd [2007] JOL 20634 (SCA)

Elandsheuwel Farming (Edms) Bpk v SBI (1978) 39 SATC 163

Geldenhuis v CIR [1947] 3 All SA 379 (C); 14 SATC 419 (C) at 389

Joffe & Co (Pty) Ltd v CIR (1946 AD 157) (13 SATC 354).

Lace Proprietary Mines Ltd v CIR 1938 AD 267, 9 SATC 349

Lategan WH v CIR (1926) 2 SATC 16

New State Areas Ltd v CIR 1946 AD 610, 14 SATC 155

Natal Estates Ltd v SIR (1975) 37 SATC 193

Port Elizabeth Electric Tramway Co Ltd v CIR (1936 CPD 241) 8 SATC 13

South Atlantic Jazz Festival (Pty) Ltd v CSARS (2015) 77 SATC 254

CIR v Visser (1937) 8 SATC 271

Journal Articles

Basson, R. 2020. An analysis of issues relating to the taxation of cryptocurrencies as financial instruments. *Journal of Economic and Financial Sciences*, 13(1):1–9.

Crosby, M., Pattanayak, P., Verma, S. and Kalyanaraman, V. 2016. Blockchain technology: Beyond bitcoin. *Applied Innovation*, 2(6-10):71.

Hari, K.R., Venkata,V.T., and Sai, S.Y., 2015. Cryptocurrency mining–transition to cloud. *International Journal of Advanced Computer Science and Applications*, 6(9): 115124

Hamukuaya, N.H. 2021. The Development of cryptocurrencies as a payment method in South Africa. *Potchefstroom Electronic Law Journal (PELJ)*, 24(1):1–23.

Härdle, W.K., Harvey, C.R. & Reule, R.C.G. 2019. Understanding cryptocurrencies. *SSRN Electronic Journal*, 1–39.

Ly, M. 2014. Coining Bitcoin’s ‘legal-bits’: examining the regulatory framework for bitcoin and virtual currencies. *Harvard Journal of Law & Technology*, 27(2):588–608.

Moosa, F. 2019. Cryptocurrencies: Do they qualify as gross income? *Journal for Juridical Science*, 44(1):10–34.

Pernice, I.G.A. & Scott, B. 2021. Cryptocurrency. *Internet Policy Review*, 10(2):1 –10

Ritter, J.A. 1995. The transition from barter to fiat money. *The American Economic Review*, 85(1):134-149.

Shovkhalov, S. and Idrisov, H. 2021. Economic and Legal Analysis of Cryptocurrency: Scientific Views from Russia and the Muslim World. *Laws*, 10(2):32.

Government Reports/Publications

Davis Tax Committee. 2015a. Davis Tax Committee: Second Interim Report on Base Erosion and Profit Shifting (BEPS) in South Africa. Johannesburg: Tax Committee.

Davis Tax Committee. 2015b. Davis Tax Committee Report – Second Interim Report on BEPS in South Africa – Summary DTC Report on Action 1: Address the Tax Challenges of the Digital Economy, Pretoria: Davis Tax Committee.

Financial Action Task Force. 2014. Virtual currencies: Key definitions and potential AML/CFT risks. [online] Available from: <https://www.fatf-gafi.org/documents/documents/virtual-currency-definitions-aml-cft-risk.html>. [Accessed: 07 September 2021].

Intergovernmental Fintech Working Group (IFWG). 2019. Consultation Paper on Policy Proposals for Crypto Assets. Available at: http://www.treasury.gov.za/comm_media/press/2019/CAR%20WG%20Consultation%20paper%20on%20crypto%20assets_final.pdf. [Accessed: 07 September 2021].

Intergovernmental Fintech Working Group (IFWG). 2021a. Position Paper on crypto assets. Available at: http://www.treasury.gov.za/comm_media/press/2021/IFWG_CAR%20WG_Position%20paper%20on%20crypto%20assets_Final.pdf [Accessed: 16 October 2021].

Intergovernmental Fintech Working Group (IFWG). 2021b. Frequently asked questions about crypto assets. Available at: http://www.treasury.gov.za/comm_media/press/2021/IFWG_CAR%20WG_Crypto%20assets%20FAQs_Final.pdf. [Accessed: 16 October 2021].

National Treasury. 2021. Explanatory Memorandum on the Taxation Laws Amendment Bill. [Online]. Available at: <https://www.sars.gov.za/wp-content/uploads/Legal/ExplMemo/LPrep-EM-2020-03-Explanatory-Memorandum-on-the-TLAB-2020-21-January-2021.pdf>. [Accessed: 16 October 2021].

Organisation for Economic Co-operation and Development. 2020. Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issues, OECD, Paris. [Online]. Available at: <https://www.oecd.org/tax/tax-policy/taxing-virtual-currencies-an-overview-of-tax-treatments-and-emerging-tax-policy-issues.pdf>. [Accessed: 07 September 2021].

South African Reserve Bank. 2014. Position Paper on Virtual Currencies. [Online]. Available at: <https://www.resbank.co.za/content/dam/sarb/what-we-do/financial->

[surveillance/generalpublic/Virtual%20Currencies%20Position%20Paper%20%20Final_02of2014.pdf](#) [Accessed 12 October 2021].

South African Revenue Service. 2020. The 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 October 2021].

South African Revenue Service. 2017. Interpretation note 33. [Online] Available at: <https://www.sars.gov.za/wp-content/uploads/Legal/Notes/LAPD-IntR-IN-2012-33-Assessed-Losses-Companies-Trade-Income-Requirements.pdf> [Accessed 12 October 2021].

Legislation: Australia

Australia, Taxation Office. 2014a. *Income tax: is bitcoin a 'foreign currency' for the purposes of Division 775 of the Income Tax Assessment Act 1997?* Taxation Determination 2014/25

Australia, Taxation Office. 2014b. *Income tax: is bitcoin a 'CGT asset' for the purposes of subsection 108-5(1) of the Income Tax Assessment Act 1997?* Taxation Determination 2014/26

Australia, Taxation Office. 2014c. *Income Tax: is Bitcoin trading stock for the purposes of subsection 70-10(1) of the Income Tax Assessment Act 1997?* Taxation Determination 2014/27

Legal Notices and Legislation: United States of America

Internal Revenue Service. 2014a. *Virtual Currencies*. Internal Revenue Service. [Online] Available at: <https://www.irs.gov/businesses/small-businesses-self-employed/virtual-currencies>. [Accessed: 15 September 2021].

Internal Revenue Service. 2014b. *Notice 2014-21*, Available at: <https://www.irs.gov/pub/irs-drop/n-14-21.pdf>. [Accessed: 01 December 2021].

Internal Revenue Service. 2019a. *Frequently Asked Questions on Virtual Currency Transactions* | Internal Revenue Service. [online] Available at: <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions>. [Accessed: 01 December 2021].

Internal Revenue Service. 2019b. *Revenue Ruling 2019-24*, Available at: <https://www.irs.gov/pub/irs-drop/rr-19-24.pdf>. [Accessed: 01 December 2021].

Internal Revenue Service. 2022. Publication 544, Sales and Other Dispositions of Assets. Available at: <https://www.irs.gov/pub/irs-pdf/p544.pdf> [Accessed: 01 June 2022].

Legal Notices and Legislation: South Africa

Exchange Control Regulations of 1961

Income Tax Act 58 of 1962

South African Reserve Bank Act 90 of 1989

Tax Administration Act 28 of 2011

Taxation Laws Amendment Act 23 of 2018

Research Reports

Basson, R. 2018. The applicability of section 24I of the Income Tax Act No. 58 of 1962 to Bitcoin gains and losses. Master's research report. Stellenbosch University (South Africa).

Berger, L.L. 2016. Bitcoin exchange transactions: Income tax implications to consider within the South African environment. Master's research report. North-West University (South Africa).

Lobban, T. 2018. The Implications of Cryptocurrency as a Financial Instrument in the Income Tax Act 58 of 1962 from a Commercial Perspective. Master's research report. University of Johannesburg (South Africa).

Parsons, S. 2014. What is Bitcoin? The potential tax consequences of transacting in virtual currency in South Africa. Proceedings of the 2014 SAAA Regional Conference. 8 August, Cape Town, South Africa. [Online] Available at: https://www.researchgate.net/publication/275028745_What_is_Bitcoin_The_potential_tax_consequences_of_transacting_in_virtual_currency_in_South_Africa. [Accessed: 05 December 2021].

Wilwerding, J. 2019. Cryptocurrency Taxation: Suggested Revisions on Current Treatment. University Honours Program. University of Nebraska at Omaha.

Websites

Ashford, K. & Schmidt, J. 2020. *What Is Cryptocurrency?* [Online] Available at: <https://www.forbes.com/advisor/investing/what-is-cryptocurrency/>. [Accessed: 17 August 2021].

Australian Taxation Office. 2018. *Mutuality and taxable income*. [Online] Available at: <https://www.ato.gov.au/non-profit/your-organisation/in-detail/income-tax/mutuality-and-taxable-income/?page=13#:~:text=Assessable%20income%20is%20any%20amount> [Accessed: 19 May 2022].

Australian Taxation Office. 2020a. *Tax treatment of crypto-currencies in Australia — specifically Bitcoin*. [Online] www.ato.gov.au. Available at: <https://www.ato.gov.au/general/gen/tax-treatment-of-crypto-currencies-in-australia--->

[specifically-bitcoin/?anchor=Transactingwithcryptocurrency](#). [Accessed: 19 October 2021].

Australian Taxation Office. 2020b. *Cryptocurrency under the microscope this tax time*. [Online] Available at: <https://www.ato.gov.au/Media-centre/Media-releases/Cryptocurrency-under-the-microscope-this-tax-time/>. [Accessed: 17 August 2021].

Australian Taxation Office. 2020c. *ATO receives cryptocurrency data to assist tax compliance*. [Online] Available at: <https://www.ato.gov.au/Media-centre/Media-releases/ATO-receives-cryptocurrency-data-to-assist-tax-compliance/> [Accessed: 17 November 2021].

Australian Taxation Office. 2020d. *Private ruling by the Commissioner of Taxation*. [Online] Available at: <https://www.ato.gov.au/forms/trust-tax-return-instructions-2018/?page=4> [Accessed: 17 May 2022].

Australian Taxation Office. 2021a. *Tax on cryptocurrency mining* [Online] Available at: <https://community.ato.gov.au/s/question/a0J9s0000001IJp/p00046719> [Accessed: 17 November 2021].

Australian Taxation Office. 2021b. ATO Community. [Online] Available at: <https://community.ato.gov.au/s/topic/a0N9s000000DacDEAS/shares-cryptocurrency> [Accessed 30 May 2022].

Australian Taxation Office. 2021c. *Australian resident for tax purposes*. [Online] Available at: <https://www.ato.gov.au/Individuals/coming-to-australia-or-going-overseas/Your-tax-residency/Australian-resident-for-tax-purposes> [Accessed 30 May 2022].

Chong, J. & Moolman, L. 2021. *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: 7 September 2021].

ComplyAdvantage. 2018. *Crypto Regulations in Australia*. [Online] Available at: <https://complyadvantage.com/insights/crypto-regulations/cryptocurrency-regulations-australia/>. [Accessed: 27 November 2021].

CNBCTV18. 2022. *What are cryptocurrency trading pairs and how do they work?* [Online] Available at: <https://www.cnbctv18.com/cryptocurrency/what-are-cryptocurrency-trading-pairs-and-how-do-they-work-13548172.htm>. [Accessed 24 May 2022].

Deloitte (n.d.). *The Blockchain Galaxy: A comprehensive research on distributed ledger technologies*. [Online] Deloitte. Available at: https://www2.deloitte.com/content/dam/Deloitte/it/Documents/financial-services/Deloitte_Blockchain_galaxy.pdf. [Accessed 22 May 2022].

Deloitte Australia (2021). *Cryptocurrency under the microscope*. [Online] Available at: <https://www.taxathand.com/article/18946/Australia/2021/Cryptocurrency-under-the-microscope>. [Accessed: 27 November 2021].

Euromoney. 2020. *Blockchain Explained: What is blockchain?* | *Euromoney Learning*. [Online] Available at: <https://www.euromoney.com/learning/blockchainexplained/what-is-blockchain>. [Accessed: 17 June 2021].

FSCA. 2020. *Declaration of crypto assets as a financial product under the Financial Advisory and Intermediary Services Act*. Available at: www.fsca.co.za. [Accessed: 12 June 2022].

Freeman, J.B. 2020a. *Mining Explained: A Detailed Guide on How Cryptocurrency Mining Works*. [Online] Freeman Law. Available at: <https://freemanlaw.com/mining-explained-a-detailed-guide-on-how-cryptocurrency-mining-works/>. [Accessed: 15 October 2021].

Freeman, J.B. 2020b. *Double-Spending Problem and Byzantine General's Problem in Relation to Cryptocurrency*. [Online] Freeman Law. Available at: <https://freemanlaw.com/double-spending-problem-and-byzantine-generals-problem-in-relation-to-cryptocurrency/>. [Accessed: 15 September 2021].

Freeman, J.B. 2022. *Taxation of Crypto Mining*. [Online] Available at: <https://freemanlaw.com/taxation-of-crypto-mining/> [Accessed: 15 September 2021].

Fuerst, M., Ittleman, A. & Rajotte, C. 2014. *Bitcoin taxation: Understanding IRS notice 2014-21*. <https://bitcoinmagazine.com/11942/bitcoin-tax-understanding-irs-notice-2014-21/#comments>. [Accessed: 01 December 2021].

Gatehub. 2020. *How Cryptocurrency Exchanges Work?* [Online] GateHub. Available at: <https://gatehub.net/blog/how-cryptocurrency-exchanges-work/>. [Accessed: 6 October 2021].

Hyatt, J. 2021. *Decoding Crypto: What It Is, How It Works, and How to Get Started*. [Online] Nasdaq.com. Available at: <https://www.nasdaq.com/articles/news-and-insights/what-is-cryptocurrency-and-how-it-works>. [Accessed: 15 October 2021].

International wealth. 2021. *Taxation of Virtual and Crypto Currency Transactions in the World in 2021* | *InternationalWealth.info*. [Online] Available at: <https://internationalwealth.info/en/cryptocurrency-en/taxation-of-virtual-and-cryptocurrency-transactions-global-review>. [Accessed: 22 June 2021].

Internal Revenue Service. 2022. *Self-Employment Tax (Social Security and Medicare Taxes)* | *Internal Revenue Service*. [online] Available at: <https://www.irs.gov/businesses/small-businesses-self-employed/self-employment-tax-social-securityandmedicaretaxes#:~:text=The%20self%2Demployment%20tax%20rate>. [Accessed: 09 June 2022].

Investing News Australia. 2021. *Cryptocurrency Regulations in Australia*. [Online] Available at: <https://investingnews.com.au/cryptocurrency-regulations-in-australia>. [Accessed: 27 November 2021].

Kazi, M.T. 2021. *Crypto currency in South Africa*. [online] www.albaraka.co.za. Available at: https://www.albaraka.co.za/About_alBaraka/Publications/crypto-currency-in-south-africa---a-brief-overview. [Accessed: 12 October 2021].

Kharpal, A. 2021a. *Crypto market tops \$2 trillion for the first time in nearly 3 months as bitcoin rallies*. [Online] CNBC. Available at: <https://www.cnbc.com/2021/08/16/bitcoin-btc-rises-above-48000-as-crypto-market-tops-2-trillion.html>. [Accessed: 19 August 2021].

Kharpal, A. 2021b. *United States of America has given away millions in its digital yuan trials. This is how it works*. [Online] CNBC. Available at: <https://www.cnbc.com/2021/03/05/United States of America s-digital-yuan-what-is-it-and-how-does-it-work>. [Accessed: 19 August 2021].

Little, K. 2021. *You Have Cryptocurrency Questions. We Have Answers*. [Online] Time. Available at: <https://time.com/nextadvisor/investing/cryptocurrency/what-is-cryptocurrency/>. [Accessed: 9 October 2021].

Luno. 2020. *Where to Spend Bitcoin in South Africa*. [Online] Available at: <https://www.luno.com/blog/en/post/south-africa-pay-with-bitcoin>. [Accessed: 20 November 2021].

Luno. 2021a. *How does a cryptocurrency exchange work?* [Online] Available at: <https://www.luno.com/learn/en/article/how-does-a-cryptocurrency-exchange-work#:~:text=A%20cryptocurrency%20exchange%20is%20simply>. [Accessed: 26 October 2021].

- Luno. 2021b. *What does trading pairs mean in cryptocurrency trading?* [Online] Available at: <https://discover.luno.com/what-does-trading-pairs-mean-in-cryptocurrency-trading/> [Accessed: 19 June 2022]
- Luno. 2022a. *Bitcoin Price Chart - Live BTC Price Graph.* [Online] Available at: <https://www.luno.com/en/price/BTC> [Accessed: 06 June 2022]
- Luno. 2022b. *Help Centre | Luno.* [Online] Available at: <https://www.luno.com/help/en/articles/11000094860-the-savings-wallet-interest-explained> [Accessed 5 June 2022].
- Nakamoto, S. 2008. *Bitcoin: a Peer-to-Peer Electronic Cash System.* [Online] *bitcoin.org.* Available at: <https://bitcoin.org/bitcoin.pdf> [Accessed: 21 June 2021].
- Organisation for Economic Co-operation and Development. 2019. *South Africa and the OECD.* [Online] *www.oecd.org.* Available at: <https://www.oecd.org/southafrica/south-africa-and-oecd.html>. [Accessed: 26 October 2021].
- Pratabh, M. 2021. *Nearly 90% of all Bitcoin has already been mined — here's how its limited supply has driven up its value.* [Online] *Business Insider.* Available at: <https://www.businessinsider.in/investment/news/bitcoin-limited-supply-has-driven-up-its-valuenearly90percenthasbe/articleshow/85349471.cms>. [Accessed: 21 October 2021].
- PWC. 2021. *Crypto Assets.* [Online] Available at: [Crypto Assets \(pwc.com\)](https://www.pwc.com/crypto-assets) [Accessed: 17 June 2022].
- South African Revenue Service. 2021a. *FAQs: Crypto assets.* [Online] Available at: <https://www.sars.gov.za/wp-content/uploads/Docs/Legal/Crypto-FAQs-reviewed-23-June-2021.pdf>. [Accessed: 07 September 2021].
- South African Revenue Service. 2021b. *Crypto Assets & Tax.* [Online] Available at: <https://www.sars.gov.za/individuals/crypto-assets-tax/>. [Accessed: 07 September 2021].

South African Revenue Service. 2021c. Tax Administration. Available at: <https://www.sars.gov.za/legal-counsel/legal-counsel-publications/find-a-guide/tax-administration/> [Accessed: 17 June 2022].

South African Revenue Service. 2018. *6 April 2018 – SARS's stance on the tax treatment of cryptocurrencies*. [Online] Available at: <https://www.sars.gov.za/media-release/6-april-2018-sarss-stance-on-the-tax-treatment-of-cryptocurrencies/> [Accessed: 21 June 2021].

Tax Consulting South Africa. 2021. *News | SARS is cracking down on cryptocurrency owners*. [Online] Available at: <https://www.taxconsulting.co.za/sars-is-cracking-down-on-cryptocurrency-owners/>. [Accessed: 29 September 2021].

Texas State Securities Board. 2021. *Fiat v. Virtual Currency | Texas State Securities Board*. [Online] Available at: <https://www.ssb.texas.gov/fiat-v-virtual-currency>. [Accessed: 15 September 2021].

Department: National Treasury. 2021. *User Alert – Monitoring of virtual currencies*. [Online] Available at: http://www.treasury.gov.za/comm_media/press/2014/2014091801%20-%20user%20alert%20virtual%20currencies.pdf [Accessed: 15 June 2022].

The Law Library of Congress. 2021. *Regulation of cryptocurrency around the world*. [Online]. Available at: <https://www.loc.gov/item/2021666100/>. [Accessed: 7 September 2021].

Tretina, K (2021). *Top 10 Cryptocurrencies in April 2022*. [Online] Forbes Advisor. Available at: <https://www.forbes.com/advisor/investing/cryptocurrency/top-10-cryptocurrencies/>. [Accessed: 05 May 2022].

United Nations (2014). *Country Classification Data sources, Country Classifications and Aggregation Methodology Data Sources*. [Online] Available at:

https://www.un.org/en/development/desa/policy/wesp/wesp_current/2014wesp_country_classification.pdf . [Accessed 18 October 2021].