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The University of Notre Dame Australia
School of Law

**FUTURE DIGITAL MONEY: THE LEGAL STATUS
AND REGULATION OF BITCOIN IN AUSTRALIA**

Chinelle van der Westhuizen
LLB, LLM (University of Pretoria)

This thesis is submitted in fulfilment of the requirements of the
Degree of Master of Laws by Research
2017

DECLARATION

This thesis does not, to the best of my knowledge, contain previously published or written material by another person except where due reference is made in the text, or any material previously submitted for a degree in any higher degree institution.

Chinelle van der Westhuizen

Date

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TABLE OF CONTENTS

	Page
DECLARATION.....	i
ACKNOWLEDGEMENTS.....	ii
TABLE OF FIGURES.....	vi
LIST OF DEFINED TERMS.....	vi
LIST OF ABBREVIATED TERMS	vii
ABSTRACT	viii
CHAPTER 1 INTRODUCTION AND STATEMENT OF THE RESEARCH PROBLEM	1
1.1 Introduction	1
1.2 Statement of the Problem	2
1.3 Background Discussion and Scope of Research	4
1.4 Research Questions	9
1.5 Research Aims.....	10
1.6 Research Framework.....	10
1.7 Research Methodology.....	11
1.7.1 The Use of Internet-Based Materials	12
1.8 Structure of the Thesis.....	13
1.9 Conclusion.....	14
CHAPTER 2 DEVELOPMENT OF MONEY AND BITCOIN AS CURRENCY	16
2.1 Introduction	16
2.2 Nature and Concept of Money	17
2.2.1 Classification of ‘Money’.....	18
2.2.2 Concluding Remarks	27
2.3 Types of Money	27
2.3.1 Barter/Commodity Transactions	28
2.3.2 Emergence of Coins and Banknotes.....	31
2.3.3 Electronic Payments	35
2.3.4 Electronic Payments and the Functions of Money.....	42
2.4 Virtual and Digital Currencies	44
2.4.1 The Development and Use of Bitcoin.....	47
2.4.2 Characteristics of Bitcoin	53

2.4.3	Advantages and Disadvantages of Bitcoin.....	55
2.4.4	Bitcoin and the Functions of Money.....	62
2.5	Bitcoin as Legal Tender	66
2.6	Conclusion.....	68
CHAPTER 3 LEGAL CHALLENGES AND RISKS OF BITCOIN TRANSACTIONS		71
3.1	Introduction	71
3.2	Legal Issues Formed within Bitcoin Transactions	72
3.2.1	The Bank–Customer Relationship	73
3.2.2	Authorised Deposit-Taking Institutions and Bitcoin Transactions	77
3.2.3	Money as a ‘Financial Product’ within Traditional and Bitcoin Transactions	85
3.3	Money Laundering	92
3.3.1	Defining Money Laundering.....	92
3.3.2	Process of Money Laundering.....	95
3.3.3	Bitcoin and Money Laundering Activities	97
3.3.4	Operation of Money Laundering Activities and Bitcoin Transactions .	105
3.3.5	Concluding Remarks	112
3.4	Tax Challenges within Bitcoin Transactions	113
3.4.1	Overview of Tax and Bitcoin Transactions.....	115
3.4.2	Bitcoin as ‘Money’ for GST Purposes	115
3.4.3	Bitcoin as ‘Property’ for Income Tax and other Benefits	118
3.4.4	Tax Evasion within Bitcoin Transactions	119
3.5	Conclusion.....	122
CHAPTER 4 A REGULATORY FRAMEWORK FOR BITCOIN IN AUSTRALIA		125
4.1	Introduction	125
4.2	Approaches to the Regulation of Bitcoin	127
4.2.1	Stringent and Legal Banning of the Use of Bitcoin	127
4.2.2	Observing other Countries (‘Wait-and-See’).....	130
4.2.3	The Implementation of Specific Bitcoin Regulation.....	132
4.2.4	Concluding Remarks	134
4.3	Regulation of Bitcoin in an International Context: the European Union, United States and Canada.....	135
4.3.1	European Union.....	135
4.3.2	United States of America	143

4.3.3	Canada.....	154
4.4	Key Points on Bitcoin Regulation in the United States, Canada and the European Union.....	161
4.5	Towards a Regulatory Framework for Bitcoin in Australia.....	165
4.5.1	Regulation of Bitcoin as a Financial Product and Legal Tender.....	167
4.5.2	Regulating Money Laundering Activities.....	178
4.5.3	Taxation Regulation and Bitcoin.....	182
4.6	Discussion on the Regulatory Framework of Bitcoin.....	187
4.6.1	Players in the Bitcoin system.....	188
4.6.2	International Cooperation.....	189
4.6.3	Neutrality.....	190
4.7	Conclusion.....	190
CHAPTER 5 CONCLUSION AND RECOMMENDATIONS		192
5.1	Introduction.....	192
5.2	Overview of the Thesis.....	193
5.3	Key Findings and Recommendations.....	199
5.3.1	Is Bitcoin Classified as Legal Tender?.....	199
5.3.2	Anti-Money Laundering Regulation within Bitcoin Transactions.....	201
5.3.3	Tax Regulation and Tax Evasion Activities within Bitcoin Transactions.....	202
5.3.4	The Nature and Application of Regulation within Bitcoin Transactions.....	203
5.4	Further Research.....	205
5.5	Concluding Remarks.....	205
BIBLIOGRAPHY		207

TABLE OF FIGURES

	Page
Figure 1 The parties involved in an EFT transaction.....	80
Figure 2 The parties involved in a Bitcoin transaction	81

LIST OF DEFINED TERMS

Bitcoin	Peer-to-peer, decentralised, anonymous network used as a payment system
Blockchain	Public digital ledger containing transactions of virtual and digital currencies
Cryptography	Encryption technology used to mine virtual and digital currencies
Commodity	Basic goods or services that are traded for similar goods or services as a means of exchange
Digital currency	Currency, unlike physical currencies, used on an online platform as a payment method between users
Legal tender	Medium of payment recognised by a government as legal currency
Virtual currency	Non-convertible medium of exchange for online platforms

LIST OF ABBREVIATED TERMS

ACC	Australian Crime Commission (from 1 July 2016 known as the Australian Criminal Intelligence Commission or ACIC)
ACCC	Australian Competition and Consumer Commission
ADCCA	Australian Digital Currency and Commerce Association
ADI/ADIs	Authorised Deposit-Taking Institution/Institutions
APRA	Australian Prudential Regulation Authority
ATO	Australian Taxation Office
AML/CTF	Anti-Money Laundering and Counter-Terrorism Financing
ASIC	Australian Securities and Investments Commission
AUSTRAC	Australian Transaction Reports and Analysis Centre
BSA	<i>Bank Secrecy Act</i>
CGT	Capital Gains Tax
CRA	Central Revenue Agency
EBA	European Banking Authority
ECJ	European Court of Justice
EFT/EFTs	Electronic funds transfer/transfers
EU	European Union
FATF	Financial Action Task Force
FBT	Fringe Benefits Tax
FinCEN	Financial Crimes Enforcement Network
FINTRAC	Financial Transactions and Reports Analysis Centre of Canada
FSI	Financial System Inquiry
GAO	US Government Accountability Office
GST	Goods and Services Tax
IRC	Inland Revenue Code
IRS	Internal Revenue Services
ISP	internet service provider
JADA	Japan Authority of Digital Assets
KYC	Know-your-customer
KYU	Know-your-user
PCMLTFA	<i>Proceeds of Crime (Money Laundering) and Terrorist Financing Act</i>
RBA	Reserve Bank of Australia
UCC	Uniform Commercial Code
US	United States
VAT	Value Added Tax

ABSTRACT

Virtual and digital crypto-currencies, specifically Bitcoin, were developed by an anonymous pseudonym ‘Satoshi Nakamoto’ in 2009 and have become a developing form of payment system used by businesses and consumers. Unlike traditional payment systems, Bitcoin is a peer-to-peer network with unique characteristics. Bitcoin is a private, anonymous and decentralised network that is intended to work independently from a government or banking authority. Bitcoin is therefore a network dependent upon mathematical algorithms between two users and managed through a process called ‘mining’, which is then stored within a user’s private ‘wallet’. This innovative technology offers numerous opportunities as a payment system; however, the legal challenges and risks it creates can be detrimental to consumers and businesses that use Bitcoin as an alternative payment system.

The legal challenges of Bitcoin cause uncertainty for governments, businesses and consumers on the treatment of Bitcoin as an acceptable means of payment in Australia. Therefore, the purpose of this thesis is to determine whether Bitcoin is a form of ‘money’ and as such ought to be accepted as legal tender by the Australian Government under specific legislative instruments. Furthermore, this thesis will examine how Bitcoin is used to facilitate money laundering activities. Moreover, this thesis considers the treatment of tax within Bitcoin transactions and how unregulated Bitcoin transactions can be used to avoid tax.

In addressing these legal issues and concerns, consideration is given to the possible regulation of virtual and digital currencies like Bitcoin in Australia. This thesis considers Australian banking, money laundering and taxation legislation and examines whether these regulatory frameworks are suitable to include Bitcoin as a payment system in order to limit money laundering and tax evasion activities within Bitcoin payment systems. Additionally, this thesis examines regulatory approaches to virtual and digital currencies in foreign jurisdictions, namely the United States, Canada and the European Union in order to gain some insight into how other countries are regulating Bitcoin as a payment system.

This thesis arrives at a number of conclusions relevant to the possible regulation of Bitcoin in Australia. Firstly, it identifies Bitcoin as money and a form of payment system, but not legal tender and therefore not an accepted legal currency in Australia, which considers self-regulation of Bitcoin as a payment system a possibility. Secondly, it recognises that existing money laundering legislation can be amended to include Bitcoin as a payment system through which money laundering can take place and where Bitcoin exchange platforms are required to implement a ‘know-your-customer’ policy or ‘know-your-user’ policy. Thirdly, this thesis identifies that Bitcoin is recognised as a commodity for tax purposes and that suitable guidelines can be introduced on how to deal with tax activities and tax evasion within Bitcoin payments. Lastly, it is also recommended that international organisations such the Financial Action Task Force and International Monetary Fund could provide clarity on the treatment of virtual and digital currencies, specifically Bitcoin, as a payment system and legal currency, given that Bitcoin is global and borderless. Therefore, this research contributes towards how the Bitcoin network operates, its legal challenges and regulation in order to further research in this area of law.

CHAPTER 1

INTRODUCTION AND STATEMENT OF THE RESEARCH PROBLEM

1.1 Introduction

The digital currency Bitcoin has been making its mark in society since 2009 when it was introduced as an alternative currency to traditional payment systems. The attraction of being able to buy and sell Bitcoins through a private online exchange platform brings benefits for consumers and businesses in dealing with it as a payment system. Bitcoin gained popularity after the release of a nine-page summary on how this peer-to-peer digital network is designed and operates.¹ Bitcoin has even found its way into popular television programs.² In the television series ‘House of Cards’, for instance, Bitcoin was mentioned as a means of payment in an email to Congressman Underwood, who was running for President of the United States. In this episode, the email addressed to the character Congressman Underwood expressed how well he had managed the Education Reform Bill and advised that he would be paid in Bitcoin sent via Mt. Gox.³

By mid-2016 it was reported that almost 16 million Bitcoins were in circulation and increasingly being used by businesses and consumers.⁴ However, Bitcoin, along with other virtual and digital currencies, has given rise to a new dimension to finance, banking and the meaning of money in society.⁵ Although Bitcoin, along with other digital currencies, has gained much attention and is used as a method of payment, it

¹James Darlington, *The Future of Bitcoin: Mapping the Global Adoption of World’s Largest Cryptocurrency Through Benefit Analysis* (Honours Thesis, University of Tennessee, 2014) 2-3.

²These include CSI, The Good Wife, Person of Interest and The Simpsons. See also, Jamie Redman, *Popular TV Shows are Now Mainstreaming Cryptocurrency* (15 July 2016) Bitcoin.com <<https://news.bitcoin.com/cryptocurrency-tv-popular/>>.

³House of Cards Season 2, Episode 2 (14 February 2014, Netflix). Mt. Gox was a virtual and digital currency platform where Bitcoin and various other digital currencies could be traded for traditional money or vice versa. However, in 2014 Mt. Gox collapsed as a result of fraudulent activity by the creator of Mt. Gox.

⁴Marlene Greenfield, *Number of Bitcoins in Circulation Worldwide* (2016) The Statistics Portal <<https://www.statista.com/statistics/247280/number-of-bitcoins-in-circulation/>>.

⁵PwC, *GST, Bitcoin and Digital Currencies* (30 March 2016) TaxTalk - Insights 1-2 <<http://www.pwc.com.au/tax/taxtalk/assets/monthly/pdf/gst-bitcoin-and-digital-currencies-mar16.pdf>>.

has nonetheless given rise to a number of key legal issues, particularly in relation to regulation. Because Bitcoin is a decentralised currency involving private and anonymous payments by users, third party regulators such as the Reserve Bank of Australia ('RBA') are not involved in clearing payments as in traditional banking transactions. As a result, attempting to regulate Bitcoin within the framework of traditional payment systems is problematic because it is not considered legal tender in Australia and therefore not a legal currency. Moreover, in addition to the issue concerning its legal status and control, the use and regulation of Bitcoin also gives rise to issues concerning taxation, in particular tax avoidance, and money laundering. Therefore, despite its popularity and increasingly widespread use, virtual and digital currencies remain problematic as governments, businesses and consumers grapple with the legal status and application of Bitcoin in relation to daily transactions.

This thesis therefore focuses on the legal challenges created by virtual and digital currencies. It will specifically deal with Bitcoin as a digital currency and the extent to which the Australian Government has and needs to implement regulatory reform with regard to the use of Bitcoin in everyday transactions. This chapter therefore sets out the statement of the problem, the research questions and aims, and the structure of the thesis.

1.2 Statement of the Problem

Virtual and digital currencies, in particular Bitcoin, have been one of the most current topics regarding payment systems in recent times. According to Meredith and Tu, '[b]itcoin has captured the imagination of the public at large'⁶ and has been 'a remarkable conceptual and technical achievement'.⁷ The Bitcoin network is a technological achievement because of its unique features: it is private, meaning that a private cryptographic key is used to make payments; it is decentralised; and it can be conveyed safely within an online platform without having a single authority backing it as a payment system.⁸ However, although virtual and digital currencies have become well established and are accepted as a means of payment, the use of such

⁶Kevin Tu and Michael Meredith, 'Rethinking Virtual Currency Regulation in the Bitcoin Age' (2015) 90 *Washington Law Review* 271, 273.

⁷Jerry Brito and Andrea Castillo, *Bitcoin: A Primer for Policymakers* (Mercatus Center, 2013) 1.

⁸Francois Velde, 'Bitcoin: A Primer' (2013) *Chicago Federal Letter* 1.

currencies is not without its problems and legal challenges. The particular nature and characteristics of Bitcoin make it widely accessible and highly transferable; however, there are issues concerning the legal status of Bitcoin and its regulation. While there is much written about Bitcoin in the press and media, there is less scholarly research on the legal issues associated with using Bitcoin and its regulations, especially within Australia. The focus of this research is therefore on examining the nature of Bitcoin, selected key legal issues associated with its use, and the extent to which it is, or ought to be, regulated in Australia.

The term 'Bitcoin' is defined by Grinberg as 'a digital, decentralized, partially anonymous currency, not backed by any government or other legal entity, and not redeemable for gold or another commodity. It relies on peer-to-peer networking and cryptography to maintain its integrity'.⁹ Similarly, Brito and Castillo define it as 'an open-source, peer-to-peer digital currency. Among many other things, what makes Bitcoin unique is that it is the world's first completely decentralized digital-payments system'.¹⁰

The description of Bitcoin indicates that it is decentralised and therefore not subject to any centralised control by an entity such as the RBA. Moreover, because of the unique characteristics attached to Bitcoin, it may be seen as and continue to grow as an alternative to global banking as it can be accessed from anywhere and at any time with very low costs associated with the payments.¹¹ However, in this regard, the use of Bitcoin raises various legal issues¹² for consumers, businesses and governments who will need to consider and be informed about the potential legal risks and

⁹Reuben Grinberg, 'Bitcoin: An Innovative Alternative Digital Currency' (2011) 4 *Hastings Science & Technology Law Journal* 159, 160. Cf Paula Hernandez-Verme and Ruy Valdes-Benavides, 'Virtual Currencies, Micropayments and the Payments Systems: A Challenge to Fiat Money and Monetary Policy?' (2013) 9(19) *European Scientific Journal* 654; Anita Ramasastry, *Is Bitcoin Money? Lawmakers, Regulators and Judges Don't Agree* (9 September 2014) <<http://verdict.justia.com/2014/09/09/bitcoin-money#sthash.uSi9yYLj.dpuf>>, 'a consensus network that enables a new payment system and completely digital money. It is the first decentralized peer-to-peer payment network that is powered by its users with no central authority or middleman. From a user perspective, Bitcoin is pretty much like cash for the Internet.'

¹⁰Brito and Castillo, above n 7, 3.

¹¹Daniela Sonderegger, 'A Regulatory and Economic Perplexity: Bitcoin Needs Just a Bit of Regulation' (2015) 47 *Washington University Journal of Law and Policy* 175, 176.

¹²Lawrence Trautman, 'Virtual Currencies; Bitcoin & What Now After Liberty Reserve, Silk Road and Mt. Gox?' (2014) 20 *Richmond Journal of Law and Technology* 1, 2.

consequences of using Bitcoin for daily business activities and transactions in the absence of or limited regulation of Bitcoin.

The purpose of this research is therefore to identify and critically examine the legal issues and consequences of using Bitcoin as a digital currency. This research will firstly examine the legal nature of Bitcoin and whether Bitcoin is considered ‘money’ within the ordinary meaning of the word and the classification of Bitcoin as currency and therefore legal tender within Australian legislative provisions. This is a key consideration because of Bitcoins unique characteristics as a payment system. It will further address the possibility of implementing a code similar to the *ePayments Code* that self-regulates Bitcoin transactions. Secondly, this thesis will examine the use of Bitcoin within money laundering transactions and whether governments will be able to implement similar ‘know-your-customer’ (‘KYC’) principles when businesses deal with Bitcoin as a payment system. Thirdly, this research will focus on whether Bitcoin transactions are subject to any tax consideration when businesses and consumers use it as a payment form, and the challenges of tax evasion when using Bitcoin. Lastly, this research will examine the extent to which Australia does or ought to regulate the use of Bitcoin by businesses and consumers who use this as a payment method. These challenges will be considered in light of the fact that Bitcoin is a decentralised, anonymous and private network that is not currently regulated by any institution or authority such as the RBA.

1.3 Background Discussion and Scope of Research

Virtual and digital currencies, such as Bitcoin, used to have very little practical value as it was not generally accepted as a form of payment.¹³ As noted above, since 2009 Bitcoin has continued to gain popularity¹⁴ and is increasingly used as a digital currency by consumers and businesses making payments with Bitcoin for everyday activities such as buying a coffee or simply making a transfer from one account to another.¹⁵ Bitcoin is an independent peer-to-peer network, which is different from

¹³Tu and Meredith, above n 6.

¹⁴Kavid Singh, ‘The New Wild West: Preventing Money Laundering in the Bitcoin Network’ (2015) 13(1) *Northwestern Journal of Technology and Intellectual Property* 38, 38.

¹⁵Krishna Jhala, ‘India: Bitcoins – Legal or Illegal in India?’, *Mondaq* (online), 30 April 2014 <<http://www.mondaq.com/india/x/310426/Financial+Services/Bitcoins+Legal+Or+Illegal+In+India>>.

traditional banking institutions in that the network is decentralised and anonymous.¹⁶ Apart from the Bitcoin system being distinct from other payment systems such as electronic fund transfers, there is also a distinction to be drawn between virtual and digital currencies. On the one hand, ‘virtual currencies’ can be defined as ‘a type of unregulated, digital money, which is issued and usually controlled by its developers, and used and accepted among the members of a specific virtual community’.¹⁷ Therefore, virtual currencies are only used as a currency in the virtual world that is not possible to convert to traditional legal currencies. ‘Digital currencies’, on the other hand, are currencies that are created electronically and stored within an ‘online wallet’ similar to a bank account. Therefore, it is possible to convert currencies like Bitcoin within an online exchange platform for traditional legal currency.¹⁸ The difference between the two currencies is relevant because Bitcoin is characterised as a digital currency rather than a virtual currency and is therefore used as a type of payment system. However, both still apply equally with regard to their use, benefits and consequences in society.

Furthermore, Bitcoin can be understood as an electronic payment system, which is also known as ‘crypto-currency’.¹⁹ It is generally referred to as a peer-to-peer network where a user can make payments online.²⁰ Transactions are not made with traditional money such as coins or notes, but by sending a sequence of numbers, using a private key, to another user who then accesses the payment through their ‘wallet’ and decides what to do with the numbers they receive.²¹ In order to use

¹⁶Legal Practice, *Virtual Currencies and Crowdfunding – What Are Their Legal Implications?* (12 June 2014) The College of Law <<http://www.collaw.edu.au/insights/virtual-currencies-crowdfunding-legal-implications/>> indicating where popularity for Bitcoin has increased in online shopping, cross-border payments as well as salary payments to employees.

¹⁷See Jenny Ta, *Bitcoin, Digital and Virtual Currency: What’s the Difference?* (2015) Thomson Reuters <<http://blog.thomsonreuters.com/index.php/bitcoin-digital-virtual-currency-whats-difference/>>.

¹⁸Ibid.

¹⁹Gareth Peters, Ariane Chapelle and Efstathios Panayi, *Opening Discussion on Banking Sector Risk Exposures and Vulnerabilities from Virtual Currencies: An Operational Risk Perspective* (2014) <<http://arxiv.org/pdf/1409.1451>>.

²⁰Carla Reyes, ‘Moving Beyond Bitcoin to an Endogenous Theory of Decentralized Ledger Technology Regulation: An Initial Proposal’ (2016) 61 *Villanova Law Review* 191, 196.

²¹Michael Nielson, *How the Bitcoin Protocol Actually Works* (6 December 2013) Data Driven Intelligence <<http://www.michaelnielsen.org/ddi/how-the-bitcoin-protocol-actually-works/>>. The Bitcoin transaction includes a private and public key. When a user makes a payment to another user, they need both keys to perform the payment. The private key is the user’s personal account number and a ‘wallet’ (which is similar to a bank account) is kept on the user’s private computer where the Bitcoins are held. The payment will be made from this wallet with the private key to another user and a public key will be used in order to receive the payment from the other user who sent the Bitcoins.

Bitcoin, special computer software has been developed to make these payments. There is also an increase in Bitcoin exchanges and companies that can be used to help a user make these exchanges.²² These Bitcoin exchange platforms assist in converting Bitcoins to real currency and vice versa.²³ The construction of the Bitcoin system and exchange platforms are discussed in Chapter 2.

There are various advantages to using Bitcoin, namely that it is private (as A and B do not usually know each other and are seen as pseudonyms); it is an open network; it is decentralised (no bank has control over it and it is done in an ad hoc fashion); and it is done virtually or digitally, therefore it can be used to make payments without the user having a bank account.²⁴ However, there are also some disadvantages when using Bitcoin including that transactions are irreversible; there is no liability protection; it is not widely accepted; and the value constantly fluctuates.²⁵ The extent of the advantages and disadvantages of using Bitcoin are discussed in Chapter 2 and how this can affect consumer and business confidence.

A significant challenge concerning the use of Bitcoin is the unregulated nature of it and the fact that this gives rise to potential legal challenges as well as the misuse of Bitcoin. Different regulatory approaches are taken by different governments and Australia is identified as one of the countries that have taken a wait-and-see approach to regulation on the use of Bitcoin.²⁶ The legal challenges, in particular whether Bitcoin is considered legal tender within a country, money laundering activities and tax evasion are all matters of consideration for regulatory reform. In regards to the regulation of Bitcoin concerning the legal challenges, the first of few cases regarding the law and regulation on Bitcoin transactions came in 2011 and 2013 respectively with the so-called *Liberty Reserve* and *Silk Road* cases that were both online black

²²Ibid. See, eg, Jose Pagliery, *Bitcoin and the Future of Money* (Triumph Books, 2014). Some prominent exchange platform players in the Bitcoin system are Bter.com; PoloNiex; C-CEX.com; Crypto Nator; BittRex.com

²³See in general Matthew Kien-Meng Ly, 'Coining Bitcoin's "Legal-Bits": Examining the Regulatory Framework for Bitcoin and Virtual Currencies' (2014) 27(2) *Harvard Journal of Law and Technology* 588, 592.

²⁴William Coates, *The Pros and Cons of Bitcoin: A Merchant's View* (11 February 2014) Coindesk <<http://www.coindesk.com/pros-cons-bitcoin-merchants-view/>>.

²⁵Ibid. See also Tyler Kubik, *The Bitcoin Revolution: The Digital Money Paradigm and the Financial Crisis* (2014) <http://www.academia.edu/7811649/The_Bitcoin_Revolution_The_Digital_Money_Paradigm_and_the_Financial_Crisis>.

²⁶Russ Marshall, 'Bitcoin: Where Two Worlds Collide' (2015) 27(1) *Bond Law Review* 89, 104.

markets where Bitcoins were used as an exchange currency to purchase illegal goods.²⁷

In the *Silk Road* case, the United States Attorney charged Ross Ulbricht with selling illegal goods on Silk Road by means of virtual and digital currencies, in particular Bitcoin. Bitcoin was used as a payment system in order to shadow the identities of the buyers and sellers on Silk Road. This case illustrates the kind of legal issues virtual and digital currencies can produce such as tax evasion and money laundering. The United States ('US') is only one example of a country attempting to regulate the use of Bitcoin transactions.²⁸ Therefore, a discussion on the law regulating the above-mentioned issues in foreign jurisdictions is constructive because some countries may be more advanced in terms of the law and regulation of the use of Bitcoin transactions than others.²⁹ An international overview on these issues in different countries will be further discussed in Chapter 4.

The challenges Bitcoin present in Australia are discussed in Chapter 3. This chapter will look to whether Bitcoin is a financial product under specific laws as well as how money laundering and tax evasion activities are being fuelled by Bitcoin transactions. Lastly, Chapter 4 specifically observes the legal challenges in foreign jurisdictions, in particular, the US, Canada as well as the European Union ('EU') and how they have focused on the regulation of the use of Bitcoin. The purpose of discussing these foreign jurisdictions is because each country has a different level of and approach to regulation that provides useful insights into the nature and extent of regulation from which lessons may be learned for the advancement of Bitcoin regulation in Australia. Conversely, development in Australia may set benchmarks for other jurisdictions.

Owing to the fairly rapid development of virtual and digital currencies, in particular Bitcoin, the law has not kept up with the regulation thereof. In this case, there is a need to ensure that the legal and regulatory gap in virtual and digital payment

²⁷*United States v Ross William Ulbricht*, 21 U.S.C §846 (2014).

²⁸Through the Financial Crimes Enforcement Network (FinCEN).

²⁹Primavera De Filippi, 'Bitcoin: A Regulatory Nightmare to a Libertarian Dream' (2014) 3(2) *Internet Policy Review* 1 and taking into account jurisdictions such as United States, Canada and the European Union.

systems is addressed in Australia as this is fundamental to the integrity of financial and banking institutions. This will also provide a secure environment for consumers and businesses that may be exposed to the risks discussed above.³⁰ The Australian Senate, for instance, made the following statement regarding Bitcoin as a payment system:³¹

The [payment] system needs to be regulated by the authorities to ensure it is soundly based, secure, and that the community can trust that the value of the currency or the means of payment will be preserved. Maintaining confidence in the safety and efficiency of the payments system is crucial to the public's ongoing trust and willingness to participate in the payment and banking systems ... To ensure the integrity and stability of the whole system it is crucial that all channels of payment are subject to the same *regulatory oversight*.³²

Therefore, a key aspect of this research is to examine the legal disparities of virtual and digital currency legislation and policies as well as the role of key regulatory authorities such as the Australian Taxation Office ('ATO'), Australian Securities and Investments Commission ('ASIC'), Australian Competition and Consumer Commission ('ACCC') and the RBA in regulating Bitcoin on some level. The regulatory framework of Bitcoin in Australia is further dealt with in Chapter 4.

Bitcoin, as a digital currency, is ground breaking and new in the banking industry therefore the scope of research has been limited in the application of its use within banking transactions. Because the currency was created in 2009, researchers realistically started researching this area of law after 2009, which makes it a recent and emerging research area in law. Much of the research and commentary on Bitcoin is focused on how this digital currency works and the technical challenges it creates;³³ however, there has been less research on the legal issues concerning the

³⁰Rohan Pearce, *MasterCard Rails against Bitcoin's Anonymity: Payments Company Argues for Greater Regulation of Bitcoin in Australia* (2 December 2014) <<http://www.computerworld.com.au/article/560825/mastercard-rails-against-bitcoin-anonymity/>>.

³¹Ibid. The Australian Taxation Office (ATO) has released its Draft Goods and Services Tax Ruling Goods and services tax: the GST implications of transactions involving bitcoin paper - GSTR 2014/D3.

³²Ibid. See also Simon Barber, Xavier Boyen, Elaine Shi and Ersin Uzun, 'Bitter to Better-How to make Bitcoin a Better Currency' (2012) *Financial Cryptography and Data Security* 399-414.

³³See, eg, Victor Li, 'Bitcoin's Useful Backbone' (2016) 102 *American Bar Association* 31; Bennett McCallum, 'The Bitcoin Revolution' (2015) 35 *Cato Journal* 347-356; Shahla Hazratjee, 'Bitcoin:

use of Bitcoin and implications for regulation.³⁴ There is also limited research on the relegation of Bitcoin in Australia. This thesis therefore seeks to contribute to the emerging body of research by focusing on the legal status and regulation of Bitcoin within a banking law framework, with specific reference to the Australian jurisdiction.

Therefore, this research will introduce a legal framework for the regulation of virtual and digital currencies, in particular Bitcoin, in Australia. The key question that will be addressed is whether Bitcoin ought to be legally accepted and regulated as a legal currency in Australia. This issue needs to be addressed against the criteria set out by applicable legislation because of Bitcoin operating like money but lacking in certain characteristics applicable to legal tender. In this research, it will be argued that virtual and digital currencies do need to be regulated to some extent in order to provide some protection to consumers and businesses using Bitcoin as a form of payment. This form of regulation will require an adaptable approach from governments in order to increase confidence as well as consumer and business protection within the public and private sectors. It is argued that well-developed regulation of Bitcoin, to some extent, will provide a sense of clarity to consumers and businesses, and stabilise any uncertainty regarding the use of Bitcoin as a payment system and legal currency.

1.4 Research Questions

Against the background to the research problem, this thesis is directed at addressing the following research questions:

- (1) What is the legal nature and status of Bitcoin?
- (2) To what extent is Bitcoin considered ‘money’ and legal tender in Australia?

The Trade of Digital Signatures’ (2015) 41 *Thurgood Marshall Law Review* 55-90; Ari Mushell, ‘Bitcoin Mania: Will it Matter?’ (2015) 132 *Banking Law Journal* 322-340.

³⁴Amy Connolly and Andreas Kick, ‘Bitcoin Research Past, Present and Future’ (Paper presented at the 11th Annual USC Upstate Research Symposium, Spartanburg SC, April 2015)
<https://www.researchgate.net/publication/278036472_Bitcoin_research_past_present_and_future>.

- (3) What legal issues does the use of Bitcoin in an unregulated environment create for consumers and businesses and in particular the Australian banking industry?
- (4) How has Bitcoin been regulated in other jurisdictions that might inform the development of an appropriate regulatory framework?
- (5) What are the current regulatory mechanisms for Bitcoin and to what extent should regulation of Bitcoin be developed within Australia?

1.5 Research Aims

In order to address the research questions, this research:

- (1) Provides an overview on the development of Bitcoin in an historical context.
- (2) Explains the meaning of Bitcoin and whether it is considered ‘money’ and therefore a currency or legal tender.
- (3) Critically examines selected legal issues namely, financial institution security within a Bitcoin transaction, money laundering and tax evasion.
- (4) Provides a discussion on the regulatory measures used in foreign jurisdictions in relation to regulating Bitcoin as a payment system.
- (5) Discusses what regulatory frameworks are in place for Bitcoin in Australia and sets out the basis for regulatory reform.

1.6 Research Framework

The topic of this thesis is situated in the area of banking law and is guided by the fundamental principles of banking law. This topic will not only deal with private law but also public law and how both branches of law can be impacted by Bitcoin transactions when considering general banking law principles.³⁵ Banking law, as general merchant law, has developed into an independent field of law that governs its own principles and signifies the importance of regulatory reform in the private and public sphere.³⁶ Established bodies such as the RBA, ASIC, ACCC and Australian

³⁵Ali Alikhania and Malihe Hosseinzadeh Davarzani, ‘An Investigation on Factors Influencing Electronic Banking Adoption in Private Banks Versus Public Banks’ (2014) 4 *Management Science Letters* 37-42.

³⁶Brigitte Haar, ‘Banking Law’ (2009) *Encyclopaedia of European Private Law Journal* 1, 2 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1691727>.

Transaction Reports and Analysis Centre all play a vital role in the regulation of banking law.

In terms of private law banking principles, this thesis will consider the general banking contract and the bank–customer relationship as well as the rights and duties between a bank and its customer. These traditional banking principles will be considered against the theories and notions of Bitcoin transactions and whether Bitcoin can truly fit within these banking principles. As a result of the ever-changing nature of money throughout the centuries, this topic will explore the difference between traditional money and virtual and digital currencies and how the concept of ‘currency’ within banking law is significant to this topic. In terms of public law banking principles, this thesis will consider money laundering, KYC principles and the impact Bitcoin has on a bank–customer relationship as well as the banking industry. The impact money laundering activities within the use of Bitcoin transactions has on consumers, businesses and most importantly the banking industry will be highlighted in this thesis and how this is challenged even further when dealing with unregulated virtual and digital currencies.

This topic will further reflect on and assist in advancing policy and regulation within banking law when taking into account virtual and digital currencies such as Bitcoin. This thesis will consider the existing banking framework for traditional banking transactions in Australia and examine whether Bitcoin can be categorised as a ‘financial product’ within the existing banking framework in order to regulate Bitcoin transactions adequately. Because the Australian Government regulates bank ownership,³⁷ policy and regulation consideration need to be a central focus when reviewing new technology in the banking industry in order to eliminate confusion on whether Bitcoin is a currency and to deal with the challenges posed by Bitcoin transactions.

1.7 Research Methodology

This research will examine Bitcoin as a currency and whether virtual and digital currencies such as Bitcoin should be regulated in Australia. This research is literature

³⁷Alan Tyree, *Banking Law in Australia* (LexisNexis, 8th ed, 2014) 19.

based and will involve a systemic study and analysis of primary and secondary legal sources.³⁸ The scope of this research will further include regulatory frameworks from foreign jurisdictions on the use of Bitcoin, namely the US, Canada and the EU, and the extent to which they regulate the use of Bitcoin. This research specifically examines the regulatory approaches taken by each country and why they either proactively regulate the legal use of Bitcoin or restrict the use of Bitcoin through regulation. The aim of including the regulatory frameworks supported by these foreign jurisdictions in this research is to gain further insights into different approaches to and issues regarding the regulation of Bitcoin, and what lessons, if any, can be gleaned for the development and advancement of an appropriate regulatory framework within Australia, especially in dealing with issues such as money laundering and tax evasion.

1.7.1 The Use of Internet-Based Materials

The researcher notes that in addition to primary legal sources and scientific journal articles, extensive use has been made of internet-based materials. As previously noted, much has been written about Bitcoin in the popular press and media. Given the burgeoning nature of the internet as a medium of communication and source of information, it is unsurprising that there is a wealth of information on Bitcoin as a current and emerging digital topic. The researcher has drawn extensively on this current material where it has been relevant and appropriate to do so. In particular, the research has used a few specific websites, namely coindesk.com and [Investopedia.com](http://investopedia.com). These websites are well-established, offering current information and reliable contributions from experts in the field of finance, banking and virtual currencies. [Coindesk.com](http://coindesk.com) is described as a ‘world leader in news and information on digital currencies such as bitcoin, and its underlying technology’.³⁹ [Investopedia.com](http://investopedia.com), operated by IAC Publishing, is staffed by leading experts in digital media and is described as ‘the largest financial education website in the

³⁸Jay Sanderson and Kim Kelly, *A Practical Guide to Legal Research* (Thomson Reuters, 4th ed, 2014); Terry Hutchinson, *Researching and Writing in Law* (Lawbook Company, 2nd ed, 2006); Michael McConville and Wing Hong Chui, *Research Methods for Law* (Edinburgh University Press, 2007).

³⁹[Coindesk, About Coindesk <http://www.coindesk.com/about-us/#>](http://www.coindesk.com/about-us/#>).

world'.⁴⁰ In selecting internet-based materials, the researcher has taken care to select material that is current, relevant, appropriate and reliable.

1.8 Structure of the Thesis

Chapter 1 presents the statement to the problem together with the background as to how Bitcoin was created and how its development has given rise to novel legal issues. It also sets out the rationale for the research, the research questions and aims for this research in order to address a regulatory framework for virtual and digital currencies such as Bitcoin within Australia.

Chapter 2 provides an overview of the history and development of money and its evolution from barter to virtual and digital currencies. It further provides a detailed discussion on the different types of virtual and digital currencies that exist, with particular reference to Bitcoin and the development and use of Bitcoin as a digital currency. Further to this discussion, this section provides an overview of the advantages and disadvantages of Bitcoin and whether the characteristics and nature of Bitcoin will deem Bitcoin as 'money' within the context of virtual and digital currencies and therefore ought to be defined and treated as legal tender and therefore a currency under Australian law.

Chapter 3 examines the legal status and regulation of Bitcoin and what legal issues it gives rise to in Australia. The legal issues dealt with in this Chapter include the legal nature of traditional banking transactions compared to Bitcoin transactions and the impact of these transactions on the bank-customer relationship; money laundering and KYC principles; and tax implications for Bitcoin transactions. This Chapter will therefore highlight the particular issues Bitcoin present in Australia and how these issues affect consumers, businesses and the Australian Government.

Chapter 4 examines banking, money laundering and tax evasion challenges within other foreign jurisdictions, specifically the US, Canada and the EU. These jurisdictions are considered because of either the successful implementation of Bitcoin regulation or the lack thereof. It continues with a discussion on Australian

⁴⁰Investopedia, *About Investopedia* <<http://www.investopedia.com/corp/about.aspx>>.

laws, policies and regulations on virtual and digital currencies such as Bitcoin and whether these laws and regulations are adequate in protecting Australian consumers and businesses when dealing with Bitcoin transactions on a daily basis. This is an important component of regulation because consumers and businesses need to be protected from any potential risks, as discussed in Chapter 3 above. This chapter will also consider whether further legislation or any regulatory instruments should be implemented in order to provide the necessary protection against the risks posed by Bitcoin transactions in Australia.

Chapter 5 provides conclusions and recommendations for the regulation of virtual and digital currencies, in particular Bitcoin, in Australia. It specifically considers whether current regulatory frameworks provide sufficient protection to consumers and businesses when using Bitcoin or whether Australia can learn from the adoption of successful regulatory frameworks in the other foreign jurisdictions discussed in Chapter 4.

1.9 Conclusion

As a decentralised, anonymous and private network, Bitcoin has changed and reformed the way society is able to make payments. Bitcoin's attractive features make it a strong competitor to traditional banking payments. However, the anonymity of users and the decentralised nature of Bitcoin make it susceptible to many legal challenges, the first being whether Bitcoin is considered 'money' and therefore legal tender within a country's jurisdiction. Furthermore, as illustrated by the *Silk Road* case, money laundering and tax evasion are some of the main legal challenges arising from the unregulated nature of Bitcoin. Therefore, as will be argued in this thesis, the application and judicious use of well-considered regulations and guidelines for businesses and consumers using Bitcoin as a method of payment is a way forward to minimising the potential risks associated with Bitcoin and at the same time embracing the potential of this new technology.

In light of the research problem, this chapter has set out the research questions and aims to address the question of whether Australia should regulate the use of virtual and digital currencies such as Bitcoin, and if so to what extent. It further addressed

the statement of the problem and background to the problem in order to consider the legal challenges virtual and digital currencies raise and the implications for consumers and businesses. The following chapter will present an historical overview of the development of money, the stages in the development of money and whether Bitcoin can be categorised as ‘money’ and therefore ought to be considered legal tender under relevant Australian law.

CHAPTER 2

DEVELOPMENT OF MONEY AND BITCOIN AS CURRENCY

2.1 Introduction

*Money is one of the shatteringly simplifying ideas of all time ...
It creates its own revolution¹*

A primary aim of this thesis is to establish whether Bitcoin can be defined and function as money and whether it will fulfil the general functions of money in order for it to be regulated as legal tender in Australia and hence a legal currency. This requires an examination of the definition of money and its functions, and the development of money as well as the undertakings by each party in a traditional transaction compared with a Bitcoin transaction as a payment system. Over the centuries, money has taken many different forms and plays a significant role in areas such as politics, the economy, technology and other areas in which we are involved in our daily activities.² The above mentioned quote suggests that society has been dependent on money since its existence and throughout its evolution.³ From dealing with barter and cowry shells to electronic and virtual/digital currency (Bitcoin) that can be accessed instantly from anywhere in the world, it illustrates how money creates its own revolution within society.

Even though the use of virtual and digital currencies like Bitcoin are easily accessible to users and a new method of banking,⁴ Bitcoin also present legal challenges within the banking sector especially in terms of how the bank–customer relationship will operate within such a transaction, and whether Bitcoin is considered legal tender and legal currency under Australian banking law, which is relevant for the purpose of regulation. Therefore, in addressing the thesis question concerning the

¹Paul J Bohannon, ‘The Impact of Money on an African Subsistence Economy’ (1959) 19(4) *The Journal of Economic History* 491, 503.

²Jack Weatherford, *The History of Money* (Three Rivers Press, 1997) xii.

³Ibid. This indicates that significant changes in society will therefore not point to the end of trade nor the downfall of money.

⁴See in general William Luther, *Bitcoin and the Future of Digital Payments* (2015) Kenyon College <<http://dx.doi.org/10.2139/ssrn.2631314>>.

operation of Bitcoin as a legal currency, this chapter by way of background context will examine the historical development of money, the definition of money, the emergence of Bitcoin as a digital currency, and whether Bitcoin fulfils the functions of money in order to be recognised as legal tender or currency in Australia.

The first part of this chapter will explore what ‘money’ is and discuss how the different functions of money, in an economical and legal sense, make money what it is today. It will further discuss what legal tender and currency is and how money, within the framework of the functions, is seen as legal tender. Part two of this chapter will discuss different types of money, which range from barter to electronic funds transfers, and how each one has developed over time. This part is examined in the light of how society has changed in accepting new payment systems introduced by governments and banking sectors. The final part of this chapter will focus on what Bitcoin is, its characteristics and whether Bitcoin fulfils the functions of money and whether it is recognised as legal tender.

2.2 Nature and Concept of Money

The examination of the nature of money is fundamental to understanding how money has become legal tender and whether it corresponds with the characteristics of Bitcoin as a payment system. The observation that ‘money is a fundamental concept of the law’ with ‘few other juridical notions of greater importance’⁵ explains the importance of money in society and how society perceives money as vital to everyday activities. However, when determining whether something amounts to ‘money’ either in its legal or economical terms, this can have consequences when dealing with banking regulation of that item. Hence it is relevant to discuss the historical development and role of money in order to explain how money impacts in its legal and economic sense on virtual and digital currencies and to determine whether Bitcoin will or should be categorised in the same way.

In relation to the nature of money, Chung explains that ‘[t]he word “money” is perhaps more important and more often used in legal relations than any other. It

⁵Arthur Nussbaum, ‘Basic Monetary Conceptions in Law’ (1937) 35 *Michigan Law Review* 865. See also Arthur Nussbaum, *Money in Law: National and International* (The Foundation Press, 1950).

appears everywhere – in constitutions, codes, statutes, judgments, administrative regulations, contracts, wills and other legal documents’.⁶ This signifies, once again, the importance of money and that an understanding is needed on where virtual and digital currency such as Bitcoin falls within the money hierarchy, for the purpose of considering regulation. If virtual and digital currencies are recognised as money and furthermore legal tender, it is useful for governments to focus on how these currencies will be regulated as a payment system in order to protect businesses and consumers from risks arising when dealing with this kind of payment method. Therefore, the following section will focus on what constitutes money in an economical and legal sense, and what the functions are that help define the concept of money.

2.2.1 *Classification of ‘Money’*

It is difficult to date exactly when money was created or when it evolved into the modern and traditional form of money as it is used today. In order to grasp the concept of money, as a currency, an overview of money is provided in order to explain how the legal definitions of money have evolved and how this may apply to new occurrences such as virtual and digital currencies.

The word ‘money’ appears to have originated from the Latin word ‘Moneta’ as this was the place where money was reportedly minted in Rome.⁷ Similarly, the word ‘pecunia’ is also used to refer to ‘money’, which signifies ‘wealth in cattle’ as a medium of exchange centuries ago.⁸ The term ‘currency’, on the other hand, originated from the Latin word ‘carrier’, which means ‘current’.⁹ This word usually refers to legal tender that is issued by governments by legal force in order to make

⁶JJ Chung, ‘Money as Simulacrum: The Legal Nature and Reality of Money’ (2009) 5 *Hastings Business Law Journal* 109, 109. See also Olujoke Akindemowo, ‘The Fading Rustle, Clink and Jingle: Electronic Value and the Concept of Money’ (1998) 21(2) *University of New South Wales Law Journal* 46.

⁷Weatherford, above n 2, 15. See in general Carl Menger, ‘On the Origin of Money’ (1892) 2 *Economic Journal* 239-255; Frederick A von Hayek, *Denationalisation of Money: An Analysis of the Theory and Practice of Concurrent Currencies* (Institute of Economic Affairs, 1976); BG Carruthers and S Babb, ‘The Color of Money and the Nature of Value: Greenbacks and Gold in Post-Bellum America’ (1996) 101(6) *American Journal of Sociology* 1556-1591.

⁸Ibid. Cf Jack Weatherford, *The History of Money* (Three Rivers Press, 1997) 21.

⁹John Rutherford, *Currency* (Routledge Dictionary of Economics, 2013)

<<http://ipacez.nd.edu.au/login?url=http://search.credoreference.com/content/entry/routsobk/currency/0>>.

coins and notes available in ‘current’ form.¹⁰ Both the terms ‘money’ and ‘currency’ can be used interchangeably; however, they are not necessarily the same and therefore it is relevant to discuss these terms in order to determine whether new technological developments in the banking industry such as virtual and digital currencies will apply to both these terms. This part will firstly look at various definitions of ‘money’ and how it operates, which is followed by a discussion of the term ‘currency’ and how it applies to things (objects) other than ‘money’.

With regards to the meaning of money, Wray observes that ‘[t]rying to “uncover” the origin of money is impossible or at least misguided unless it is placed within the context of a theoretical framework’.¹¹ Hence, the theoretical framework mentioned by Wray consists of the relevant functions of money. These functions include money being a medium of exchange, a unit of account and lastly a store of value.¹² If money does not fulfil these functions within an economical sense, it will not be categorised as money. However, Grierson notes that ‘study of the origins of money must rely heavily on inferences from early language, literature, and law’.¹³ In saying this, different meanings, both economical and legal, must be given to understand the complexities of what ‘money’ entail. This thesis will not pursue an in-depth discussion on the economical position of money; rather the aim of this thesis is to understand the concepts of ‘money’ and ‘currency’ and when it constitutes legal tender, which is relevant in terms of characterising Bitcoin as ‘money’ and possibly legal tender. Nonetheless some reference to the economic framework of defining money is necessary as it provides a basis for the legal definition and discussion that follows.

Economically, money is seen as ‘a fundamentally social phenomenon or institution, whose origins must lie in varied and complex social practices’ and ‘a commodity with some special characteristics that is chosen to lubricate a pre-existing market’.¹⁴ Furthermore, Meltzer defines money as ‘a nominal stock with a nominal price of

¹⁰Ibid.

¹¹Randall Wray, ‘The Credit Money, State Money, and Endogenous Money Approaches: A Survey and Attempted Integration’ (2006) <<http://goo.gl/zig59>>.

¹²See discussion below.

¹³Philip Grierson, *The Origins of Money* (Athlone Press, 1977) 12. See also Philip Grierson, *Dark Age Numismatics* (Variorum Reprints, 1979).

¹⁴Éric Tymoigne and Randall Wray, ‘Money: An Alternative Story’ (Working Paper No 45, 2005) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1009611>.

unity; a dollar is a dollar, and a pound is a pound'.¹⁵ Therefore, transactions take place within a central market, meaning a business dealing with loans and finances, where commodities are given value for goods or services. These commodities have been in existence for centuries and have played a significant role in bartering transactions as will be discussed below.

Asmundson and Oner refer to 'money' as 'something that holds its value over time, can be easily translated into prices and is widely accepted'.¹⁶ Therefore, money is seen as a widely-accepted asset that is exchanged in society and keeps its value as a form of payment. Furthermore, economists such as Niall Ferguson define money as 'not metal, but trust inscribed and a crystallised relationship between debtor and creditor' as he views it more as having control than something physical.¹⁷ On the other hand, Friedman's more philosophical interpretation of money is 'whatever is generally accepted in exchange for goods and services – accepted not as an object to be consumed but as an object that represents a temporary abode of purchasing power to be used for buying still other goods and services'.¹⁸ Lastly, Yang identifies money economically as 'medium of exchange – the set of assets in an economy that people regularly exchange for goods and services from others'.¹⁹ This illustrates that money is an asset a person owns and converts in order to purchase goods or services. This signifies that it is a general means of payment accepted by society. Although the above-mentioned definitions contribute towards the definition of money, it is also necessary to consider the definition of money within a legal framework or context. This is to indicate how 'money' forms part of a legal system and how it may adapt to new technological developments such as virtual and digital currencies, and whether regulation of virtual and digital currencies is possible within a regulatory banking framework.

The legal terminology for money has mainly adopted the economic definition of money and generally states that it is 'a commodity which is used to denote anything

¹⁵Allan Meltzer, 'What is Money?' (1995) *Economic Affairs* 8, 8.

¹⁶Irena Asmundson and Ceyda Oner, 'What is Money?' (2012) *Finance & Development* 52, 52.

¹⁷Niall Ferguson, *The Ascent of Money: A Financial History of the World* (Penguin Press, 2008) 30, 341.

¹⁸Milton Friedman, *Money Mischief: Episodes in Monetary History* (Houghton Mifflin Harcourt, 1992) 16.

¹⁹Bill Yang, 'What is (Not) Money? Medium of Exchange and Means of Payment' (2007) 51(2) *The American Economist* 101, 101-102.

which is widely accepted in payment for goods or discharge of other business obligations'.²⁰ This definition may be seen as too broad or too narrow and therefore it is difficult to generally define 'money' in certain legal terms. Mann defines money, in its legal meaning, as 'those chattels issued under the authority of law, denominated with reference to a unit or account, that are meant to serve as a universal means of exchange in the state of issue'.²¹ Therefore, an appropriate general legal definition for 'money' should provide the characteristics of money, its functions and acceptability within society that represents a more legal explanation of money.²² Keynes further states that money 'serves two principal purposes ... it facilitates exchanges. In the second place ... it is a recognised characteristic of money as a store of wealth'.²³ Therefore, money, as a legal object, plays an important part through its principal functions, which will be discussed below.

An early legal definition for money was recorded in the case of *Moss v Hancock*,²⁴ which held that money 'passes freely from hand to hand throughout the community in final discharge of debts and full payment for commodities, being accepted equally without reference to the character or credit of the person who offers it and without the intention of the person who receives it to consume it or apply it to any other use than in turn to tender it to others in discharge of debts or payment of commodities'.²⁵

Likewise, a modern definition of money was accepted by the court in *Travellex Ltd v Federal Commissioner of Taxation*,²⁶ which stated that 'money is any generally accepted medium of exchange for goods and services and for the payment of

²⁰BK Mehta, *Money and Banking* (Motilal Banarsidass Press, 2000) 13. See also Benjamin Geva and Muharem Kianieff, *Reimagining E-Money: Its Conceptual Unity with other Retail Payment Systems* (2002) <<http://goo.gl/QfR4y>>.

²¹Francis Mann, *The Legal Aspect of Money* (Oxford University Press, 6th ed, 1992) 8. See also Charles Proctor, *Mann on The Legal Aspect of Money* (Oxford University Press, 6th ed, 2005) 8. The Oxford English Dictionary defines 'money' as 'a current medium of exchange in the form of coins and banknotes; coins and banknotes collectively' <<http://www.oxforddictionaries.com/definition/english/money>>. Furthermore, the same dictionary refers to 'chattels' as 'an item of property other than freehold land, including tangible goods (chattels personal) and leasehold interests.'

²²Ibid 14.

²³John Keynes, 'The General Theory of Employment' (1937) 51 *Quarterly Journal of Economics* 186.

²⁴(1899) 2 QB 111. See also Michale Penny, 'The Law of Money' (1989) 13(4) *LawNow* 10; Mervyn Dendy, 'Of Money and Mutton' (2000) 8(1) *Juta's Business Law* 5; Rostam Vakhitov and Iaroslav Vakhitov, 'The Concept of Money' (2003) 28(1) *Review of Central and East European Law* 103.

²⁵Ibid 116.

²⁶[2008] FCA 1961.

debts'.²⁷ Therefore, these primary functions are imperative in order to recognise it as money and hence a legal currency by governments.²⁸

Common to these definitions is the fact that 'money' is described as a medium of exchange, unit of account and store of value. These three elements refer to money's functions and how money is recognised. Therefore, rather than providing a single definition of money, it can be more clearly and precisely defined and explained with reference to its three core functions:²⁹

- (i) medium of exchange;
- (ii) unit of account; and
- (iii) store of value.

Turgot, for instance, states that 'the nature of money derived from its ultimate status as a commodity' and is therefore capable of functioning as money within the context as medium of exchange, unit of account and store of value.³⁰ He explains further that 'all commodities have two essential properties of money, that of measuring and that of representing all value'.³¹ These functions are important in relation to something being recognised as money and therefore legal currency. However, Scitovsky notes that money 'is a difficult concept to define, partly because it fulfils not one but three functions, each of them providing a criterion of moneyness ... those of a unit of account, a medium of exchange, and a store of value'.³² Therefore, the following section will present a discussion on each function according to priority and relevance and how it applies to the above-mentioned definitions of money. This discussion is further significant in order to determine whether Bitcoin fulfil these functions as a form of currency.

²⁷Ibid [25].

²⁸Jerry Jordan, 'Governments and Money' (1996) 15 *Cato Journal* 167, 169.

²⁹William Jevons, *Money and the Mechanism of Exchange* (D Appleton & Co, 1876) ch III <<http://www.econlib.org/library/YPDBooks/Jevons/jvnMME3.html>>.

³⁰Peter Groenewegen, 'The Nature, Functions, and Value of Money: A Brief Exposition of Turgot's Monetary Theory' (2007) 39(2) *History of Political Economy* 253, 254.

³¹Ibid 256.

³²Tibor Scitovsky, *Money and the Balance of Payments* (George Allen & Unwin, 1969) 1.

2.2.1.1 Medium of Exchange

The first function of money is that it serves as a medium of exchange, which is the primary function of money.³³ The phrase ‘medium of exchange’ is believed to have been first used by Aristotle where gold and silver were valued as a commodity and used as a means of exchange because of its durability and consistent accountability for goods or services.³⁴ This means that when goods or services are exchanged, commodities such as gold, silver, cowry shells and various other items were always accepted for those goods or services.³⁵ In relation to a commodity being a means of exchange, Menger noted that a medium of exchange developed as follows:³⁶

the fact that the most reasonable and efficient economic agents, in their own economic interest, have long accepted eminently marketable goods in exchange for all others. Such progress in economic knowledge did indeed occur as a result of general cultural progress wherever external conditions did not hinder it.

This suggests that with the development of money over time, society, in the form of bartering transactions, has accepted commodities as a means of payment and medium of exchange that forms an integral part of the formation of money as we know it today. Therefore, the function ‘medium of exchange’ is recognised as the first function of the three and from which the other two functions were derived.³⁷ Furthermore, in order for money to be used as a medium of exchange it must be:³⁸ divisible, in that it can be divided into quantities; portable, in order for it to be easily conveyed; durable and easily treatable; and difficult to counterfeit, in order to prevent people from creating their own money. These characteristics are integral to

³³See, eg, Robert Jones ‘The Origin and Development of Media of Exchange’ (1976) 84 *The Journal of Political Economy* 757.

³⁴The following was claimed by Schumpeter: ‘... whatever ... its shortcomings, this theory [of Aristotle], though never unchallenged, prevailed substantially to the end of the nineteenth century and even beyond. It is the basis of the bulk of all analytic work in the field of money’ – Joseph Alois Schumpeter, *History of Economic Analysis* (Oxford University Press, 1954) 63. See also Marcello Messori, *Credit and Money in Schumpeter’s Theory* (2002) <<http://goo.gl/SOKr5>>.

³⁵See also Karl Brunner and Allan Meltzer, ‘The Uses of Money: Money in the Theory of an Exchange Economy’ (1971) 61 *The American Economic Review* 784.

³⁶Carl Menger, ‘Money’ (2002 [1909]) in M Latzer and S Schmitz (eds.), *Carl Menger and the Evolution of Payments Systems: From Barter to Electronic Money* (Edward Elgar, 2002) 25–107.

³⁷Alla Semenova, ‘Carl Menger’s Theory of Money’s Origins: Responding to Revisionism’ (2014) 21(1) *European Journal of the History of Economic Thought* 107, 117.

³⁸See Karin Collins, *An Introduction to Business Volume 2* (Lardbucket, 2012) 687, <<http://2012books.lardbucket.org/books/an-introduction-to-business-v2.0/s17-01-the-functions-of-money.html>>.

the function of medium of exchange because this is what confers ‘prestige, power and social status’ on money and finally provide status to money as a payment method.³⁹

Apart from the above-mentioned characteristics of medium of exchange, the motive behind discussing medium of exchange in a legal framework is the issue of payment.⁴⁰ The function medium of exchange has given significance to money as a payment system throughout the centuries. The payment system is therefore the medium through which money is transferred from a creditor to a debtor in return for the goods or services. Furthermore, Goode observes that:⁴¹

Payment in the legal sense means a gift of loan of money or any act offered and accepted in performance of a money obligation. So, an act cannot constitute payment unless money is involved, but this requirement may be satisfied not only by the transfer of money, but also by the performance of some other act in fulfilment of an obligation to pay money.

Therefore, money, as medium of exchange, will usually be bound by ‘final payment’ in order to extinguish a debt as it performs a role similar to a mediator.⁴² Once the person accepting the medium of exchange is satisfied it can be used to purchase other items, the medium of exchange is then accepted as money.⁴³ The accepted medium may include barter (commodities), coins, banknotes or electronic funds transfers (as discussed later in this chapter). The acceptance of money is performed through a central banking authority, the RBA. A fundamental function of the RBA, in regards to the function medium of exchange, is the issuance of currency, which is legal tender, and this is where legal tender can be seen as the accepted medium of

³⁹Semenova, above n 37, 112.

⁴⁰Money in its legal framework has a different meaning to economists in relation to the issue of payment.

⁴¹David Goode, *Payment Obligations in Commercial and Financial Transactions* (Sweet & Maxwell, 1983) 11.

⁴²Olujoke Akindemowo, ‘The Fading Rustle, Chink and Jingle: Electronic Value and the Concept of Money’ (1998) 21 *University of New South Wales Law Journal* 466, 471.

⁴³Forrest Capie, Dimitrios Tsomocos and Geoffrey Wood, ‘E-Barter Versus Fiat Money: Will Central Banks Survive?’ (Working Paper No 197, Bank of England, 2003)
<http://papers.ssrn.com/sol3/papers.cfm?abstract_id=530686>.

exchange in a country.⁴⁴ Once money, as medium of exchange, has been accepted for the goods or services, the next function, which is a unit of account, must be considered in order to place some value on this medium of exchange and for it to fulfil the functions of money.⁴⁵

2.2.1.2 Unit of Account

The second function of money is that it serves as a unit of account. This function provides that money, as a medium of exchange for goods or services, must have some value attached to it and, therefore, that all things can be measured against money as a unit and also be transferred from one person to another.⁴⁶ By reducing the unit of money into something called ‘price’, it is easier to exchange goods and therefore store the money as a unit of account in order for it to grow in value.⁴⁷ Therefore, a unit of account looks towards ‘trade over time’ in order to provide it with the specific functions it has.⁴⁸ In other words, the goods or services will in future specify the value of payment for those goods or services as a unit of account.⁴⁹

As a unit of account, money also needs to have the characteristics of being divisible, fungible⁵⁰ and countable in order for people to see the value in money.⁵¹ According to Simmel, the existence of money depends on money having these unique characteristics and states that money’s ‘unconditional interchangeability, is the

⁴⁴See Stefan Schmitz, ‘The Political Economy of Institutional Change in the Payment System and Monetary Policy’ (Paper presented at Institute Vienna Circle, University of Vienna, 10 January 2006) <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=944404>.

⁴⁵Mann, above n 21, 24.

⁴⁶David Currie, *Macro Economic Analysis* (Nirali Prakashan, 1981) ch 2.14.

⁴⁷Forms of Unit of Accounts: Australian Dollar, American Dollar, British Pounds. See also William S Jevons, ‘Money and the Mechanism of Exchange’ (D Appleton & Co, 1876) ch III, <<http://www.econlib.org/library/YPDBooks/Jevons/jvnMME3.html>>.

⁴⁸Michel Aglietta, ‘Whence and Whither Money?’ in Riel Miller and Wolfgang Michalski, *The Future of Money* (OECD, 2002) ch 2, 36.

⁴⁹Matthias Doepke and Martin Snhneider, *Money as a Unit of Account* (August 2016) <http://faculty.wcas.northwestern.edu/~mdo738/research/Doepke_Schneider_0816.pdf>.

⁵⁰Money being fungible is seen as ‘when two or more things are interchangeable, can be substituted for each other, or are of equal value, they are described as fungible. Forms of money, such as dollar bills or euros, are fungible since each can be exchanged or substituted for another of the same currency. Similarly, put and call futures contracts on the same commodity that expire on the same date are fungible since a contract to buy a call can offset, or neutralize, a futures contract to sell a put’ – Dictionary of Financial Terms, ‘Fungible’ (2008) <<http://financial-dictionary.thefreedictionary.com/Fungible>>.

⁵¹Mitchell Innes, ‘What is Money?’ (1913) 30 *Banking Law Journal* 377, 377; Ludwig von Mises, *The Theory of Money and Credit* (Yale University Press, 1953) 46.

internal uniformity that makes each piece exchangeable for another'.⁵² Therefore, things such as money, wine and plots of land are seen as *res fungibiles* that 'occur in ordinary dealings, not separately, but only in certain quantities' and therefore 'bound to supply a definite quantity of things of a definite quality, the separate things being reckoned, as between themselves, as equal'.⁵³ This is relevant to mention because one aim of this thesis is to determine whether virtual and digital currencies such as Bitcoin fulfil the functions of money and whether they can be seen as divisible, countable and fungible.

2.2.1.3 Store of Value

The third function is that 'money' serves as a store of value.⁵⁴ The Finance and Investment Dictionary defines 'store of value' as 'an exchangeable asset that can be saved and later retrieved without significant loss of purchasing power. Money and gold are the traditional stores of value'.⁵⁵ In this regard, money can achieve capital growth when it is stored and used at a later time as an investment.⁵⁶ As a result, this element serves as an important function when considering whether over time money has reached value as an investment asset.⁵⁷ As will be discussed later in this chapter, money has different origins and as a result the functions of money play a significant role in how money operates as a form of payment.

⁵²See David Laidler and Nick Rowe, 'Simmel's Philosophy of Money: A Review Article for Economists' (1980) 18 *Journal of Economic Literature* 97, 101-105. See also Dirk Baecker, 'The Conditions of Money's Compliance: Georg Simmel and Sociological Systems Theory' (1996) 34 *Sociologia Internationalis* 13.

⁵³*Brady and Others v Stapleton* (1952) 88 CLR 322, 345. See also *Freelance Global Limited (in Liquidation) and Others v Barbara-Anne Bensted and Others* [2016] VSC 181.

⁵⁴Mann, above n 21.

⁵⁵J Downes and J Goodman, 'Store of Value' (2014) *Dictionary of Finance and Investment Terms* <http://ipacez.nd.edu.au/login?url=http://search.credoreference.com/content/entry/barronsfin/store_of_value/0>.

⁵⁶Weatherford, above n 2, 17.

⁵⁷Mann, above n 21. For an interesting discussion on the different types of 'things' which can be stored for value, see Jeremy McDermott, 'Town where Cocaine is the only Currency', *The Telegraph* (online), 15 June 2008 <<http://www.telegraph.co.uk/news/worldnews/southamerica/colombia/2135436/Town-where-cocaine-is-the-only-currency.html>>.

2.2.2 Concluding Remarks

Money can be defined from different perspectives including economically or legally, and as stated by Wray it is in fact ‘a complex social institution’.⁵⁸ However, the meaning of money can be explained by reference to the key functions by which ‘money’ is recognised and accepted as a form of payment by governments. The functions of money include medium of exchange, unit of account and store of value. The function medium of exchange is the most important of the three functions in that it provides governments the right to issue money as legal tender in order to exchange it for goods or services. Secondly, money must fulfil the function as unit of account for there to be value attached to the type of medium of exchange. This is significant because of the way payment is made to a creditor and the value attached to the money as a unit. Lastly, money also fulfils the function of store of value. In this regard, money has the durability to be saved or invested in order to build value on this medium of exchange. If the medium of exchange cannot fulfil this function, it cannot be seen as money. The functions of money play a significant role within Bitcoin transactions and whether Bitcoin can be recognised as ‘money’ and therefore legal tender in Australia.

2.3 Types of Money

Throughout the centuries, different types of money have been created and accepted as a medium of exchange.⁵⁹ It is therefore appropriate to discuss these different forms of money and how they apply and are used in modern society as this explains how the traditional notions of money transformed to general acceptance of electronic money and virtual currencies. The following statement by Samuelson provides a useful summary of the transformation of money:⁶⁰

Inconvenient as barter obviously is, it represents a great step forward from a state of self-sufficiency in which every man had to be a jack-of-all-trades and master of none ... If we were to construct history along hypothetical, logical lines, we should naturally follow the age of barter by the age of commodity money. Historically, a great variety of commodities has served at one time or another as a medium of exchange: ...

⁵⁸Wray, above n 11, 19.

⁵⁹Ibid.

⁶⁰Paul Samuelson, *Economics* (McGraw-Hill, 9th ed, 1973) 274.

tobacco, leather and hides, furs, olive oil, beer or spirits, slaves or wives ... huge rocks and landmarks, and cigarette butts. The age of commodity money gives way to the age of paper money ... Finally, along with the age of paper money, there is the age of bank money, or bank checking deposits.

Following from this quote, virtual and digital currencies is a developing concept in the banking industry and adds to the list of payment transformation. The following section will examine the different types of money, namely barter, coins and notes, electronic money and digital/virtual money (in particular Bitcoin), and also how each type fulfils the functions of money in order to be classified as legal tender and hence a legal currency.

2.3.1 Barter/Commodity Transactions

Bartering is the first and one of the oldest forms of ‘money’ used as medium of exchange between people. It is also seen as a primitive form of exchange.⁶¹ During 9000 BC, it was mostly livestock that was used as a medium of exchange and expanded to using crops as a medium of exchange because of the development of agriculture.⁶² However, a variety of items or consumables including salt, tobacco, leather, olive oil and alcohol were used as barter.⁶³

Bartering, ‘may take place on an informal one-on-one basis between individuals and businesses, or it can take place on a third-party basis through a barter exchange company’.⁶⁴ In the case of *United States v Barter Systems Inc*⁶⁵ a barter exchange was described as follows:

A barter exchange acts as a clearinghouse for the purchase of goods and services by exchange members. Trading between exchange members is conducted in ‘barter units’ with no cash changing hands. If an exchange member wishes to purchase certain

⁶¹Glyn Davies, *A History of Money* (University of Wales Press, 2002) 9. See also Benjamin Geva, ‘From Commodity to Currency in Ancient History: On Commerce, Tyranny, and the Modern Law of Money’ (1987) 25 *Osgoode Hall Law Journal* 134-135.

⁶²Tyler, ‘A Short History of Barter’, *Barter News Weekly* (online), 26 March 2010 <<http://www.barternewsweekly.com/2010/03/26/a-short-history-of-barter-1921/>>.

⁶³Marius Alexianu, ‘Lexicographers, Paroemiographers and Slaves-for-Salt Barter in Ancient Thrace’ (2011) 65 *Phoenix* 389, 390.

⁶⁴Cara Baros, ‘Barter, Bearer, and Bitcoin: The Likely Future of Stateless Virtual Money’ (2014) 23 *University of Miami Business Law Review* 201, 204.

⁶⁵694 F.2d 163, 164 (8th Cir. 1982).

goods or services, he obtains a referral by the exchange to a ‘providing member’ who supplies the desired goods or services. When the purchasing and providing members have agreed on prices and terms, the providing member contacts the exchange. If the exchange determines that the purchasing member has sufficient barter units in his account, it authorizes the trade. For facilitating such barter exchanges ... [the barter exchange] charges its members a fee of ten percent of the value of each transaction, payable in barter units and credited to [the exchange’s] account. [It] also charges its members an imitation fee and annual dues, both paid in cash. These transactions result in tax consequences for [the exchange] as well as for exchange members engaging in them.

Similarly, the ATO describes barter as follows:⁶⁶

In its simplest form, bartering involves the direct exchange of goods or services for other goods or services without reference to money or a money value. Barter may occur between two people on a private basis, e.g., neighbours may exchange produce grown for their own consumption. Bartering may also occur in the commercial field, e.g., a firm may agree to purchase goods or services from another firm provided its own products are taken in exchange, either in full or partial satisfaction of the purchase price. Of course, a combination of both the above situations may also occur, that is, barter between a firm and a private individual.

Therefore, this form of payment is simply known for barter exchanges between private individuals or corporations. Although this was one of the first and oldest forms of exchange, it is still found to operate in modern society by way of international deals between certain countries.⁶⁷ During the ‘barter period’, barter was seen as a system whereby goods or services were exchanged for other goods or services, and as times changed the barter system developed and accommodated itself within society.⁶⁸ One of the characteristics of a barter system is that it can only

⁶⁶Australian Taxation Office, *Income Tax: Barter and Countertrade Transactions*, Tax Ruling No. IT 2668.

⁶⁷This will apply to doing business through exchange of letters of credit.

⁶⁸For a discussion on the development of the barter-system see Kenneth Hermele, *Commodity Currencies vs Fiat Money – Automaticity vs Embedment* (Working Paper No 44, Financialisation, Economy, Society and Sustainable Development Project, 2013) <<http://fessud.eu/wp-content/uploads/2013/04/Commodity-Currencies-vs-Fiat-Money-Working-paper-No.44.pdf>>. See also Geoff Davies, *Economia: New Economic Systems to Empower People and Support the Living World* (ABC Books, Electronic Edition, 2010).

operate if there is a so-called ‘double coincidence of wants’.⁶⁹ This simply means that both parties in a barter transaction fulfil their needs with regard to the exchange by accepting the traded goods or services.

In the case of barter and because it is seen as a primitive form of exchange, commodities⁷⁰ were used in transactions as it was convenient, it could be easily stored and it was durable throughout most of the transactions.⁷¹ Commodities, as mentioned above, included salt, olive oil, shells and livestock which is convenient and durable to trade; however, these commodities had their weaknesses despite their durability in trade. Hence, the bartering system has the following advantages and disadvantages attached to it when comparing it to modern forms of exchange. Advantages of the barter system are that it is a simple and effortless system; trading can take place without needing cash as goods are traded for similar goods or services; it is a system that helps cut costs for a business; and it is free from any international trade regulations.⁷²

The disadvantages of bartering include that both parties must agree to the delivery of the goods or services that can make it a timely process; it is sometimes difficult to negotiate a value or price between the parties that is suited to the exchanged goods or services; there is a lack of divisibility and therefore bartering goods cannot be quantified; it is difficult to store the value attached to bartering goods because of its physical nature; and lastly transportation of the commodities or bartering goods can be problematic.⁷³ Considering the disadvantages of bartering, it is notable that barter is a poor form of money (being only a medium of exchange) and it does not fulfil the functions of money as set out above.

⁶⁹Allan Meltzer, *Money* (2002) <<http://goo.gl/1ypr3>>.

⁷⁰Commodities can be defined as ‘a basic good used in commerce that is interchangeable with other commodities of the same type’. It also refers to primitive instruments such as amber, beads, cowries, drums, eggs, feathers, gongs, hoes, ivory, jade, kettles, leather, mats, nails, oxen, pigs, quartz, rice and salt – See Glyn Davies, *A History of Money* (University of Wales Press, 2002) 27.

⁷¹Currie, above n 46, 10. See also Paul Einzig, *Primitive Money in its Ethnological, Historical and Economic Aspects* (Eyre & Spottiswoode, 1966) 346-353.

⁷²Aparijita Sinha, *Complete Information on the Advantages and Disadvantages of Barter System* (27 December 2010) Preserve Articles <<http://www.preservearticles.com/201012271793/barter-system.html>>.

⁷³Ibid. See also Glyn Davies, *A History of Money* (University of Wales Press, 2002) 15-17.

These advantages and disadvantages of the bartering system suggest that some other form of exchange for goods or services was needed on a cheap and efficient level without using barter as a means of exchange⁷⁴ because bartering could be inconvenient at some times.⁷⁵ As mentioned, the bartering system can adapt to its environment within society and although some disadvantages exist, the advantages can still be relevant to businesses in a modern society through modern bartering and the exchange of goods or services. Bartering has played a significant role in the exchange of goods and services, and while it may still be found in limited use in society, for example, in traditional rural communities,⁷⁶ coins and notes supplemented bartering as a form of exchange and is now known as the traditional notion of money.

2.3.2 *Emergence of Coins and Banknotes*

Coins and banknotes are seen as the traditional medium of exchange and legal tender. Money was previously referred to by Mann as ‘all chattels which, issued by the authority of the law and denominated with reference to a unit of account, are meant to serve as universal means of exchange in the State of issue’⁷⁷ and therefore money is now made up of coins and banknotes.⁷⁸ The development of coins and banknotes can be traced back to 1100 BC, when it is recorded that the Chinese created the first coins by moving from using weapons as a medium of exchange to carving their tools into bronze casts in order to shape a circle-like coin.⁷⁹ This was seen as the first identified coins in history.⁸⁰ The first non-Chinese gold and silver coins were reportedly minted by the Greeks and in particular the Lydians.⁸¹

⁷⁴Capie, Tsomocos and Wood, above n 43.

⁷⁵Robin Kaufman, ‘Living on the Cheap, is Barter Better? Revenue Rulings and a Selective Analysis of the Effect of TRA 84 on Barter Transactions’ (1985) 37 *University of Florida Law Review* 641, 641.

⁷⁶See Lord Avebury, *A Short History of Coins and Currency* (John Murray, London, 2nd ed, 1903) 1-10.

⁷⁷Mann, above n 21, 8.

⁷⁸For an in-depth discussion on coins and banknotes, see FH Lawson and Bernard Rudden, *The Law of Property* (Oxford Press, 2nd ed, 1982) 37; HC Black, *Black’s Law Dictionary* (West Publishing, 5th ed, 1979).

⁷⁹Andrew Beattie, *The History of Money: From Barter to Banknotes* (29 December 2015) Investopedia <http://www.investopedia.com/articles/07/roots_of_money.asp>.

⁸⁰Mann, above n 21.

⁸¹All the credit went to King Croesus during the mid-sixth Century BC as he is reputed to have manufactured the first bimetallic coin. This led to Lydia increasing their trade and economy. See in general Weatherford, above n 2, 30.

The Chinese also developed some primitive form of banknotes in which they issued leather-money each representing a level of 40 000 cash, but a modern type of banknote was created by the end of the middle ages.⁸² This was partly due to a shortage in coins and the bankers during that period had to create a new type of money, which is today known as paper money or banknotes (fiat money).⁸³

Modernised banknotes were first issued by the Bank of Stockholm in 1656 whereas the Massachusetts Bay Colony was the first colony to issue banknotes with successive numbering on them in 1690.⁸⁴ Paper banknotes made trade and commerce easier as notes were more easily conveyed and transported compared to coins, which were heavy and not easy to transport.⁸⁵

The court in *Miller v Race*⁸⁶ viewed the legality of banknotes as follows:⁸⁷

Now they are not goods, not securities, nor documents for debts, nor are so esteemed: but are treated as money, as cash, in the ordinary course and transaction of business, by the general consent of mankind; which gives them the credit and currency of money, to all intents and purposes. They are as much money, as guineas themselves are; or any other current coin, that is used in common payments, as money or cash.

Because of the nature and use of coins and banknotes, they were recognised and functioned as the first form of legal tender. ‘Legal tender’ can be defined as ‘any official medium of payment recognised by law that can be used to extinguish a public or private debt, or meet a financial obligation’.⁸⁸ Legal tender is seen as a currency, which is defined according to a country’s legislation.⁸⁹ Within Australia,

⁸²Mann, above n 21, 181. See also Andrew Dahdal, ‘The Constitutionality of Fiat Paper Money in Australia: Fidelity or Convenience?’ (2013) 2 *The Journal of Peace, Prosperity & Freedom* 49.

⁸³See Martin Shubik, ‘Money and Goldstone modes’ (2001) 1(1) *Quantitative Finance* 186-190. This paper money also included cheques.

⁸⁴Leon Perlman, *Legal and Regulatory Aspects of Mobile Financial Services* (LLD Thesis, University of South Africa, 2012) 64.

⁸⁵Weatherford, above n 2, 141. See also Benjamin Geva, ‘From Commodity to Currency in Ancient History: On Commerce, Tyranny, and the Modern Law of Money’ (1987) 25 *Osgoode Hall Law Journal* 115, 117.

⁸⁶(1758) 97 ER 398.

⁸⁷Ibid 401.

⁸⁸Investopedia, *Legal Tender* <<http://www.investopedia.com/terms/l/legal-tender.asp>>.

⁸⁹Mann, above n 21, 42. See also John Black, *Oxford Dictionary of Economics* (Oxford University Press, 2nd ed, 1997) 266.

coins and banknotes are seen as legal tender and are defined in s 16 of the *Currency Act*⁹⁰ as follows:

(1) A tender of payment of money is a legal tender if it is made in coins that are made and issued under this Act and are of current weight: (a) in the case of coins of the denomination of Five cents, Ten cents, Twenty cents or Fifty cents or coins of 2 or more of those denominations – for payment of an amount not exceeding \$5 but for no greater amount; (b) in the case of coins of the denomination of One cent or Two cents or coins of both of those denominations – for payment of an amount not exceeding 20 cents but for no greater amount; (c) in the case of coins of a denomination greater than Fifty cents but less than Ten dollars – for payment of an amount not exceeding 10 times the face value of a coin of the denomination concerned but for no greater amount; (d) in the case of coins of the denomination of Ten dollars – for payment of an amount not exceeding \$100 but for no greater amount; and (e) in the case of coins of another denomination – for payment of any amount.

According to s 16 of the *Currency Act*, coins and banknotes are legal tender that is authorised and issued by the government.⁹¹ From this definition it is evident that the government has three exclusive rights when issuing legal tender as a currency. Firstly, coins and banknotes are seen as legal tender within a certain jurisdiction;⁹² secondly, regulating this currency within the jurisdiction; and lastly, to change the currency within the certain jurisdiction as they want to.⁹³ Legal tender is therefore recognised as a legal form of payment in order to settle a financial debt⁹⁴ whereas currency is a recognised system by governments and includes the dollar, euro and pound.

As mentioned earlier in this chapter, the terms ‘money’ and ‘currency’ are sometimes used interchangeably, but not all ‘money’ is always seen as ‘currency’

⁹⁰*Currency Act 1965* (Cth). See also Denis Cowen and Leonard Gering, *The Law of Negotiable Instruments* (Juta, 5th ed, 1985) 7.

⁹¹See also *Reserve Bank Act 1959* (Cth) s 36. ‘Australian notes are a legal tender throughout Australia.’

⁹²Cecile Brokelind, *Discussion of Some Legal Issues Raised by the Introduction of the Euro* (Working Paper Series No 25, Lund University, Department of Business Law 2004) <<http://goo.gl/ctmYt>>.

⁹³*Ibid.*

⁹⁴For example, coins and banknotes.

and vice versa.⁹⁵ Money, as currency, is best described as ‘chattels’ (see definition discussed above) and Douglas notes that money can ‘pass into currency’ and be transferred as a valuable asset from one person to another’.⁹⁶ This reaffirms the definition provided by the case in *Moss v Hancock* that money passes freely from one person’s hand to another as a currency and therefore provides value to the goods or services being exchanged.⁹⁷

In relation to coins and banknotes being an accepted medium of exchange, they fulfil the functions of money mentioned above in that they function firstly as a medium of exchange because coins and banknotes are portable and it is easy to exchange; secondly as a unit of account because it can be transferred from one person to another and also extinguish debt between each other; and lastly they can be used to store value and add to a customer’s savings.⁹⁸ As already noted, coins and banknotes are legally recognised and defined as legal tender and hence a government controlled and regulated currency.

In summary, money has developed from a bartering-system (commodity) to something more constant such as coins and banknotes, which has changed the way society has been able to exchange goods and services, and engage in different transactions. Notwithstanding the fact that coins and banknotes remain an essential currency and a primary means of exchange, advancements in technology have given rise to innovative developments in electronic currency and banking that has further enhanced and diversified the way in which people conduct transactions and exchange goods and services. This also raises the question whether electronic money is seen as legal tender under legislation. The section that follows examines how technology has developed and further modernised banking through electronic payments and methods such as electronic fund transfers.

⁹⁵See in general Geoffrey Ingham, *The Nature of Money* (Politi press, 2004) 198; Geoffrey Ingham, ‘The Specificity of Money’ (2007) 48 *European Journal of Sociology* 265-272.

⁹⁶Simon Douglas, *Liability for Wrongful Interferences with Chattels* (Bloomsbury Publishing, 2011) ch 2. See also Benjamin Geva, ‘From Commodity to Currency in Ancient History: On Commerce, Tyranny, and the Modern Law of Money’ (1987) 25 *Osgoode Hall Law Journal* 115, 117.

⁹⁷Mann, above n 21.

⁹⁸For a discussion on the functions of money using coins and banknotes see Irena Asmundson and Ceyda Oner, ‘What is Money?’ (2012) 49(3) *International Monetary Fund (IMF)* <<http://www.imf.org/external/pubs/ft/fandd/2012/09/basics.htm>>.

2.3.3 *Electronic Payments*

Coins and banknotes are still used as a primary medium of exchange, but with the introduction of technology into banking services, it has accommodated society with ways to interact with markets and buy goods or services in an even more convenient way.⁹⁹ The introduction of electronic payments by the banking industry has revolutionised the different pathways to banking. A useful starting point to explain electronic payments is by means of the following quote:¹⁰⁰

There have been three great ages of payment: first notes and coins, then paper payments and, lastly, electronic payments. Electronic payments give the opportunity for non-banks to break into the payment system, threatening one of the last services uniquely provided by banks. New technology has not only provided an ever increasing range of electronic payment products, it has also had far-reaching effects on the way in which banks operate in the widest sense.¹⁰¹

The creation of paper money and banknotes was a significant development in the exchange of goods and services, and seen as the way forward in banking and a way to transport money easier and faster than coins. However, with advancements in technology and global banking, banks and other financial institutions have sought more innovative ways to conduct banking business through electronic banking and the use of electronic money, which has also been driven by improving customer service, retaining customers and keeping banking costs lower through this technological development.¹⁰² The innovative ways to conduct banking through

⁹⁹Richard Hooley, 'Cybercash: The Legal and Regulatory Issues Raised by Electronic Money' (2001) *5 Yearbook of International Financial and Economic Law* 273, 273.

¹⁰⁰Patrick Frazer, *Plastic and Electronic Money. New Payment Systems and Their Implications* (Woodhead-Faulkner, 1985) 3.

¹⁰¹See also Benjamin Cohen, 'Electronic Money: New Day or False Dawn?' (2001) 8(2) *Review of International Political Economy*, 197 – 225. Furthermore, Benjamin explains that: 'Accounting technology has allowed banks to handle greatly expanded numbers of customers; automation technology has substantially reduced the real cost of handling payments; liberating technology has cut the banks free from traditional constraints over time and place; and innovation technology has allowed banks to introduce a whole new range of products and services.'

¹⁰²James Robertson, *Future Money: Breakdown or Breakthrough?* (Green Books, 2012) 41. According to the Reserve Bank of Australia 'for many consumers, electronic means of payment are supplanting the traditional cheque, although the "smart card" revolution remains elusive and e-commerce has yet to develop an effective replacement for the cheque for business use' - Supriya Singh, 'Impersonalisation of Electronic Money: Implications for Bank Marketing' (2004) 22(7) *International Journal of Bank Marketing* 504, 506-507.

electronic banking include electronic fund transfers (EFTs)¹⁰³ and other online banking services.

Electronic payments can be defined as ‘a digital equivalent of cash, stored on an electronic device or remotely at a server’.¹⁰⁴ On the other hand, the Bank for International Settlements defines electronic payments as ‘a wide variety of proposed retail payment mechanisms’.¹⁰⁵ The European Commission further describes electronic money as ‘value stored electronically which is issued on receipt of funds of an amount not less in value than the monetary value issued, and accepted as a means of payment by parties other than the issuer’.¹⁰⁶ These definitions of electronic payments indicate that it can include a variety of payment methods between the bank and its customer as well as customers themselves.

Electronic payments are not a new concept, but it has become more prevalent and sophisticated with the advancement of technology during the last few decades. In 1960, banks moved from coins and banknotes towards electronic banking when the American Express Company was the first to use and process magnetic codes¹⁰⁷ to provide customers with a unique electronic banking experience.¹⁰⁸ This refers to banks providing customers with a range of new and technology-advanced banking products such as credit cards and electronic funds transfers (‘EFTs’). With the

¹⁰³An electronic fund transfer can be defined as electronic money used in place of coins and notes and accessed through an online account consisting of codes and numbers – Federal Trade Commission, *Electronic Banking* (August 2012) <<https://www.consumer.ftc.gov/articles/0218-electronic-banking#electronic>>.

¹⁰⁴European Union, *E-Money* (2014) <http://ec.europa.eu/finance/payments/emoney/index_en.htm>.

¹⁰⁵Bank for International Settlements, *Implications for Central Banks of the Development of Electronic Money* (Basel, October 1996) <<http://www.bis.org/publ/bisp01.pdf>>.

¹⁰⁶European Commission, *Electronic Money Directive* (2009/110/EC)

<http://ec.europa.eu/internal_market/payments/emoney/text/index_en.htm>. See also Janine Firpo, ‘E-Money – Mobile Money – Mobile Banking – What’s the Difference?’ on *The World Bank* (21 January 2009) <<http://blogs.worldbank.org/psd/e-money-mobile-money-mobile-banking-what-s-the-difference>>.

¹⁰⁷See, eg, Pagan Kennedy, ‘Who Made that Universal Product Code?’, *New York Times Magazine* (online), 4 January 2013,

<http://www.nytimes.com/2013/01/06/magazine/who-made-that-universal-product-code.html?_r=0>.

¹⁰⁸Weatherford, above n 2, 234. Wennerland states that: ‘[A]s the practice of transmutation proved insurmountably difficult, an interest developed in credit-money as an alternative method of expanding the money stock. ... In the 1690s, the Bank of England finally engineered a system of credit-money. The success of this system coincided with (or caused) a rapid decline in royal support for alchemy, elevating credit-money to the status of sole tried and reasonably successful mechanism for the expansion of the money stock. Hence, while the prospect of expanding the money stock at will might have been conceived initially in alchemical terms, it only materialized in the form of credit-money...’ - Carl Wennerland, ‘Credit Money as the Philosophers Stone: Alchemy and the Coinage Problem in Seventeenth Century England’ (2003) 35 *History of Political Economy* 234-61.

development of technology in the banking industry, transactions involving the use of electronic money have increased with people using credit cards and EFTs for a wide range of daily transactions, and by means of which customers save time and may pay minimal or reduced transaction fees.¹⁰⁹ The introduction of electronic money such as credit cards and EFTs has provided society with a cashless way of banking in the modern era.¹¹⁰

As a new and modern way of banking, electronic payments impact on different relationships within the transaction. The different types of relationships within an electronic payment transaction include Business-to-Business ('B2B'); Business-to-Consumer ('B2C'); Consumer-to-Business ('C2B') and Consumer-to-Consumer ('C2C').¹¹¹ This is important to note as there is a difference in communication between parties in Bitcoin transactions that is explained further on in the thesis.

According to Murthy,¹¹² there exist six different types of electronic payment systems:

- (i) *Credit cards*: This type of electronic money is the most popular form of payment used by consumers as it provides them with privacy, mobility and convenience. This would be a daily transaction where consumers would buy goods or services on their credit card.¹¹³
- (ii) *Micro payments*: These are small amounts of payments that form part of a transaction and the client can decide whether or not it will form part of the transaction.¹¹⁴

¹⁰⁹See in general Bradyn Jeffus, Steven Zeltmann, Ken Griffin and Alex Chen, 'The Future of Mobile Electronic Payments' (2015) 13(2) *Competition Forum* 337; Fumiko Hayashi, 'Access to Electronic Payment Systems by Unbanked Customers' (2016) 101(3) *Economic Review* 51; Sarah Hughes, 'Developments in the Law Affecting Electronic Payments and Financial Services' (2015) 71 *The Business Lawyer* 361; Aarti, *History of Electronic Money* (2009) Buzzle <<http://www.buzzle.com/articles/history-of-electronic-money.html>>.

¹¹⁰See, eg, Shahzavar Karimzadi, *Money and its Origins* (Routledge, 2013) 54.

¹¹¹Singh Sumanjeet, 'Emergence of Payment Systems in the Age of Electronic Commerce: The State of Art' (2009) 3(3) *Asia Pacific Journal of Finance and Banking Research* 18, 20.

¹¹²CSV Murthy, *E-Commerce: Concepts, Models and Strategies* (Himalaya Publishing House, 2002) 626.

¹¹³Sumanjeet, above n 111, 24. See also Kenneth Laudon and Carol Traver, *E-Commerce* (Pearson Education, 2002).

¹¹⁴*Ibid.*

- (iii) *Personal computer banking*: This is where the client can access their personal banking details and make payments through their personal computer and account.¹¹⁵
- (iv) *Smart cards*: Smart cards are seen as credit cards, but it includes a memory chip in order to store more value and information than a normal credit card.¹¹⁶
- (v) *E-cash*: E-cash is an electronic form of storing value and cash. It attracts customers to use this as it is a safe and private way of storing cash electronically.¹¹⁷
- (vi) *Electronic cheques*: Electronic cheques still has the same function as paper cheques, but was created to help business perform business in a more convenient way electronically and also contains an electronic signature.¹¹⁸

These different types of electronic payment systems form the basis of electronic banking and have created fast and efficient ways to conduct transactions for businesses and consumers. The move towards electronic banking has several key advantages but there are also some noteworthy disadvantages, as outlined below.

2.3.3.1 Advantages of Electronic Payments

The main advantages of using electronic payments are that it is flexible, convenient and private. It is, as mentioned, increasingly being used by businesses and consumers because of these advantages. Owing to the advancements in electronic banking during the last few decades, customers have increasingly used this as a means of payment on a daily basis for banking activities.¹¹⁹ Transactions and various online payment options are provided to customers with electronic banking.¹²⁰ The various online options provided to customers means that banking institutions are

¹¹⁵Ibid 25. See also Danielle Fernandez, *What is PC Banking?* (2016) <<http://smallbusiness.chron.com/pc-banking-72403.html>>.

¹¹⁶Sumanjeet, above n 111, 26.

¹¹⁷Ibid 28. See also David Wright, *Comparative Evaluation of Electronic Payment System* (INFO, 2002).

¹¹⁸Ibid 29. See also Rajesh Chakrabarti and Vikas Kardile, *E-Commerce: The Asian Manager's Handbook* (Tata McGraw Hill, 2002).

¹¹⁹Ibid.

¹²⁰Riel Miller, Michalski Wolfgang and Barrie Stevens, *The Future of Money* (OECD, 2002), 51-52 <<https://www.oecd.org/futures/35391062.pdf>>.

adapting to customer's needs wherever they are. Therefore, existing payment methods such as electronic banking is considered a means of moving away from coins and banknotes.¹²¹

Electronic banking is certainly a faster and convenient way of doing banking because customers can manage numerous online transactions at once without having to go into a bank and wait for services from a bank cashier or manager to receive payments or banking documents.¹²² Online banking also provides the customer with better banking fees since online transactions generally provide the benefit of reduced fees in order to attract more customers to use technologically advanced payment systems.¹²³ Hence Papadopoulos notes that '[t]he establishment of electronic money was supported as a way to save on the social costs of issuing and using cash. The contactless technology used in the electronic purses was chosen in order to provide payment services at a fraction of the cost of credit and debit cards and in levels comparable to the use of cash'.¹²⁴ Lastly, when a customer needs to verify their identity, it is much simpler than with any other means of payment such as a cheque.¹²⁵ Additionally, the development of 'PayPass' technology is but one example of the speed and efficiency with which payments can be made without additional verification.

Electronic banking also has the characteristic of being private where the customer can pay and perform transactions in the privacy of their own home or business.¹²⁶ This is a clear advantage to those who do not have time to go into a bank as they can therefore perform payments online from home or anywhere else.¹²⁷ Moreover, a customer who uses this type of payment method does not have to carry around large

¹²¹See Heinrich Schulze, 'E-Money and Electronic Fund Transfers: A Shortlist of Some of the Unresolved Issues' (2004) 16 *South African Mercantile Law Journal* 50, 53.

¹²²Saleh Nsouli and Andrea Schaechter, *Challenges of the E-Banking Revolution* (2002) International Monetary Fund <<http://www.imf.org/external/pubs/ft/fandd/2002/09/nsouli.htm>>.

¹²³See discussion, above n 108.

¹²⁴Georgios Papadopoulos, 'Electronic Money and the Possibility of a Cashless Society' (Working Paper No 18, Erasmus University Rotterdam, 2007) <https://www.academia.edu/630789/Electronic_Money_and_the_Possibility_of_a_Cashless_Society>.

¹²⁵Peter Schuck, 'Electronic Funds Transfer: A Technology in Search of a Market' (1975) 35(1) *Maryland Law Review* 74, 80.

¹²⁶Miller, above n 120.

¹²⁷Zachary Omariba, Nelson Masese and G Wanyembi, 'Security and Privacy of Electronic Banking' (2012) 4(3) *International Journal of Computer Science* 432, 438.

amounts of money and therefore reduces the risk of physical loss or theft of money.¹²⁸ Notwithstanding the numerous advantages electronic banking entail, there are some disadvantages to electronic banking and customers utilising this type of banking.

2.3.3.2 Disadvantages of Electronic Payments

Despite the advantages of electronic banking, economists have also indicated that electronic payments can bring about disadvantages. The main disadvantages cited include the misuse of electronic (online) transactions and failure to protect consumers from theft as well as fraudulent misrepresentations and increased fees for international transfers.¹²⁹ Because of the characteristics of electronic banking systems, which entails a third party (bank) authorising online payments and online access, EFTs through electronic banking systems can be easily manipulated and therefore increase the potential for theft and fraud, and most importantly money laundering.¹³⁰ These disadvantages may overall lead to an inadequate balance of consumer and business protection within the banking industry.

Therefore, banking institutions need to keep their technology systems up to date and highly secure in order to prevent the risk of theft, fraud and money laundering from occurring, which in turn can lead to money being insecure.¹³¹ If a financial institution has the necessary up-to-date systems, potential risks of theft, fraud and money laundering of a customer's account will be protected, which will assist in consumer/customer protection. These issues will specifically be discussed in further detail in Chapter 3 in regard to the use of Bitcoin transactions.

¹²⁸Schuck, above n 125.

¹²⁹Booz-Allen & Hamilton notes that 'Payment of revolving credit and other bills which vary monthly in amount is seen as neither particularly convenient nor in the consumer's self-interest. Indeed, it is generally viewed by consumers as limiting their ability to manipulate their own finances, to make discretionary expenditures, or to exert leverage in cases where they wish better service from a creditor. Restriction of these options is viewed as limiting the customer's ability to 'control his money' - Booz-Allen & Hamilton National Analysts, *Marketing Update: Insights into Two Payments Systems Products* (1973) in Peter Schuck, 'Electronic Funds Transfer: A Technology in Search of a Market' (1975) 35(1) *Maryland Law Review* 74, 77.

¹³⁰Frank Hespeler, *Electronic Money and the Monetary Transmission Process* (Cuvillier Verlag, 2008) ch 7.

¹³¹Safari Kasiyanto, 'E-Money as Legal Tender: Does the Status Really Matter?' (Paper presented at the 12th International Conference e-Society, Spain, February 2014) 11, 17. See also *Kennison v Daire* (1986) 160 CLR 129; *R v Evenett; Ex parte Attorney-General* [1987] 2 Qd R 753.

As mentioned above, one of the advantages of electronic banking is its privacy feature. However, the difficulty with having online banking details within an online system, like electronic payments, is that customers are at a risk of getting their banking details disclosed without the customers knowing it as a result of unauthorised payments, fraud and money laundering activities.¹³² One way is through hacking of online accounts. The disclosure of private information raises serious consumer protection concerns.¹³³ Therefore, a consumer can face financial difficulty with electronic payments as a result of unauthorised payments.¹³⁴ However, once a consumer complaint is lodged regarding this unauthorised payment, the banking institution is required to pay the money back to the customer.¹³⁵ This is also the case where money is stolen as a result of the loss of personal details, and banks need to investigate these matters accordingly.¹³⁶

Lastly, most international transfers incur more costs on customers and can cause inconvenience because of the ineffective or slow process of these international transfers.¹³⁷ Making electronic payments can be a lengthy process because it can take several days before it reaches the recipient's bank account in another country and therefore banking institutions will generally charge more fees when dealing with international transfers.¹³⁸ This is only relating to international transfers whereas local online payments are convenient and effective accessibility is possible within hours. However, as a result of the delay in international transfers there is a possibility that the account can be hacked, and personal information lost.¹³⁹ Therefore, it is costly

¹³²Australian Competition and Consumer Commission, *Consumer Protection* (2016) <<http://www.accc.gov.au/consumers/consumer-protection>>.

¹³³See also Consumer Affairs Victoria, *Online Shopping and Consumer Protection, Discussion Paper on E-Commerce* (2004) <[Online%20shopping%20and%20consumer%20protection%202004.PDF](#)>.

¹³⁴Paul White, *The Regulation of Electronic Funds Transfer in Australia: An Integrated Multidisciplinary Approach* (PhD, Victoria University, 2007) 28.

¹³⁵Ibid. See also Olujoke Akindemowo, 'Electronic Money Regulation: A Comparative Survey of Policy Influences in Australia, the European Union and the United States of America' (2001) 11(1) *Journal of Law, Information and Science* 61.

¹³⁶Note, 'The Disadvantages of Internet Banking', *The Guardian* (online), 7 December 2000 <<http://www.theguardian.com/money/2000/dec/06/consumernews.internetphonesbroadband1>>.

¹³⁷Michelle Baddeley, 'Using E-Cash in the New Economy: An Economic Analysis of Micropayment Systems' (2004) 5(4) *Journal of Electronic Commerce Research* 239, 243.

¹³⁸Woda Krzysztof, 'Money Laundering Techniques with Electronic Payment Systems' (2006) 18 *An International Journal* 27. See also UniChange, *Disadvantages and Advantages of Electronic Payment Systems* (2015) <https://unichange.me/advantages_of_electronic_payment_systems>.

¹³⁹See also Ari Shapiro, *In A Global Economy, Why's It So Expensive to Transfer My Money?* (2014) <<http://www.npr.org/sections/parallels/2014/01/16/263105199/in-a-global-economy-whys-it-so-expensive-to-transfer-my-money>>.

for the banking institution to implement secure systems in order to prevent these risks from occurring.

Despite the advantages and disadvantages attached to electronic money, agencies such as ASIC and the Australian Prudential Regulation Authority ('APRA') regulate electronic banking, which means that consumers will in most circumstances have recourse against any of the disadvantages noted above.¹⁴⁰

2.3.4 *Electronic Payments and the Functions of Money*

Owing to society accepting and acknowledging electronic money as a means of payment and governments recognising electronic payments such as electronic fund transfers as legal tender, it is possible that electronic forms of payment fulfil all the functions of money in that it is considered a medium of exchange, unit of account and store of value.

Firstly, it is accepted as a medium of exchange due to the minimisation of costs and time in exchanging goods and services.¹⁴¹ Electronic banking has become one of the preferred ways of exchange as a result of society accepting it as a medium through which goods or services are paid for. Secondly, it is accepted as a unit of account because electronic payments are based on current monetary forms and provides for trade within an economy.¹⁴² Electronic payments are therefore accepted as a standard unit in Dollar, Pounds and other accepted currencies. Lastly, electronic payments are accepted as a store of value because once money is accepted as a medium of exchange and monetary unit, money, in its electronic form, will not lose its value and will provide society with the possibility to store (save) money, as an investment, which money that is not immediately accessible.¹⁴³ It is clear from these functions

¹⁴⁰Specifically see the *e-Payments Code* (2012) that regulates electronic banking.

¹⁴¹For a discussion on electronic money as a means to reduce cost and time see Supriya Singh, 'Impersonalisation of Electronic Money: Implications for Bank Marketing' (2004) 22(7) *International Journal of Bank Marketing* 504, 511; Shann Turnbull, *Could Regulation of Alternative types of E-money Reduce Systemic Risks and Costs?* (7 May 2013) <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2261519>.

¹⁴²Barbara Good, *Changing Face of Money: Will Electric Money Be Adopted in the United States?* (Routledge, 2014) 16. See also Frederic Mishkin, *The Economics of Money, Banking and Financial Markets* (Addison Wesley, 7th ed, 2004) 46.

¹⁴³Suad Bećirović, 'Challenges Facing E-Money' (2014) 1(1) *University journal of Information Technology and Economics* 28, 30. See also Stephen Millard, Andrew Haldane and Victoria Saporta, *The Future of Payment Systems* (Routledge, 2008) 247.

that electronic payments are recognised as a form of money and an accepted form of legal currency.

When addressing the question as to whether EFTs are recognised as a form of payment and legal currency, the term 'finality of payment' is a relevant consideration. Geva explains, in relation to finality, that 'the first impact of the payor's instructions on the banking system is a debit to the payor's account with the payor's bank. Having received the payor's instructions and debited the payor's account, the payor's bank forwards the instructions, directly or through intermediary bank(s), to the payee's bank, which ultimately proceeds to credit the payee's account. Hence, in a credit transfer, the debit to the payor's bank precedes the credit to the payee's account and is not subject to reversal for lack of funds'.¹⁴⁴

He further mentions that 'payment instructions may be referred to as the destination bank. In a debit transfer, the payment process is thus completed at the payor's bank. Conversely, in a credit transfer, the payment process is completed at the payee's bank. Hence, "finality of payment" is to occur at the destination bank; in a debit transfer it is the payor's bank, and in a credit transfer it is the payee's bank'.¹⁴⁵

This refers to the process of how payment of EFTs become final and that governments recognise this process as a means to transfer value through instructions from one party to another. This is significantly different to the Bitcoin process as third party financial parties are removed from being instructed to give value to a transaction. The ePayments Code as well as relevant financial legislation will be specifically dealt with in Chapter 3 in relation to EFTs and Bitcoin.

The development of money from barter and commodities to electronic and global systems shows that 'we are standing at the beginning of what promises to be the greatest social and cultural revolution since the invention of money'.¹⁴⁶ Electronic money has indeed become a powerful financial force in the banking world. As the old way of banking (use of coins and notes) is slowly declining, a new era of digital

¹⁴⁴Benjamin Geva, 'Payment Finality and Discharge in Funds Transfers' (2008) 83 *Chicago-Kent Law Review* 633, 635.

¹⁴⁵*Ibid.*

¹⁴⁶Weatherford, above n 2, 250.

banking is forming that is revolutionary and rather abstract by making use of computer portals in transferring money from one person to another.¹⁴⁷ The development of electronic banking has been hailed as a ‘the next best thing’.¹⁴⁸ Jack Weatherford further classifies it as a ‘cultural and social revolution since the invention of money’¹⁴⁹ and there is no doubt that electronic banking has had a major impact on society and the way people conduct business.¹⁵⁰

While electronic payments continue to develop and form the basis of most banking and financial transactions, the emergence of virtual and digital currencies has become a new innovative way of banking and managing daily transactions. The following section examines the development of virtual and digital currencies and provides a detailed discussion on Bitcoin as one of the first and most popular digital currencies operating as a payment system.

2.4 Virtual and Digital Currencies

The development of money from barter to electronic payments shows how society has adapted in using traditional forms of payment to accepting modern forms of banking. As electronic banking has evolved and technology has advanced, the notion of money has continued to evolve with the emergence and use of virtual and digital currencies. As SE Sever writes:¹⁵¹

Money is a collective agreement. If enough people come to the same agreement, what they agree upon becomes secondary, whether it be farm animals, gold, diamonds, paper, or simply a code. History proves all these cases to be true. Who

¹⁴⁷Ibid 248.

¹⁴⁸Raechel Hughes, ‘Are you being self-served? Further Research Implications of the Australian Banking Industry from a Commercial Customer Perspective’ (2008) 26 *International Journal of Bank Marketing*

<http://www.anzam.org/wp-content/uploads/pdf-manager/2146_HUGHES_RAECHEL.PDF>.

¹⁴⁹Weatherford, above n 2, 250.

¹⁵⁰For example, Europe preferred to use debit and credit cards and moved directly to the usage of electronic cards, whereas Japan still preferred to use cash. Regardless of how electronic payments developed, all developed countries moved towards a cashless society and the public has accepted its existence. The existence of electronic payments meant that governments needed to regulate it and define it within a framework of electronic payment systems. European countries include Belgium, France, Germany, Netherlands and Switzerland. For a discussion on these countries see Helmi Hamdi, ‘Some Ambiguities Concerning the Development of Electronic Money’ (2007) 31(3) *Financial Theory and Practice* 293.

¹⁵¹James Darlington, *The Future of Bitcoin: Mapping the Global Adoption of World’s Largest Cryptocurrency through Benefit Analysis* (Honours Thesis, University of Tennessee, 2014) 1.

knows what the future is going suggest to us as money, once we see digital currencies as ordinary?

Therefore, a key aim of this thesis is to identify whether virtual and digital currencies like Bitcoin ought to be recognised as ‘legal tender’ and also ‘money’ through the application of the functions as set out above. Virtual and digital currencies are not exactly new in the modern era. One of the first digital currencies that emerged in 1996 was called E-gold.¹⁵² This type of digital currency was developed in a way to make payments decentralised, which means it is not backed by a government and it could also be used as a means to launder money.¹⁵³ Further, in 1998, Wei Dai flagged an idea to develop a similar type of anonymous digital currency in which ‘untraceable pseudonymous entities ... [could] cooperate with each other more efficiently, by providing them with a medium of exchange and a method of enforcing contracts’ and ‘where government involvement is not temporarily destroyed but permanently forbidden and permanently unnecessary’.¹⁵⁴

Following the creation of E-gold, virtual and digital currencies developed increasingly and became popular in 2003 when Linden Lab developed an online game program called ‘Second Life’, which is an online virtual world where one can create, buy and build a virtual world with virtual currencies called the ‘Linden dollar’ and interact with so-called ‘Avatars’.¹⁵⁵ Second Life (online game) was created with the vision that one could trade virtual property using virtual money.¹⁵⁶ This virtual currency is accessed online and can be used for any purpose within Second Life.¹⁵⁷ The users in Second Life can also earn Linden dollars through in-world transaction.¹⁵⁸ Therefore, a virtual currency, like Linden dollar, is different to Bitcoin, as will be explained below.

¹⁵²Andrew Wagner, *Digital vs Virtual Currencies* (22 August 2014) Bitcoin Magazine <<https://bitcoinmagazine.com/15862/digital-vs-virtual-currencies/>>.

¹⁵³Ibid.

¹⁵⁴Nikolei Kaplanov, ‘Nerdy Money: Bitcoin, the Private Digital Currency and the Case against its Regulation’ (2012) 25 *Loyola Consumer Law Review* 111, 113.

¹⁵⁵David Bray and Benn Konsynski, ‘Virtual Worlds, Virtual Economies, Virtual Institutions’ (Paper presented at Virtual Worlds and New Realities Conference, Emory University, November 2006) <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=962501>.

¹⁵⁶Ibid. Miroslava Rajcaniova and d’Artis Kancs, ‘The Digital Agenda of Virtual Currencies: Can Bitcoin become a Global Currency?’ (2016) *Information Systems and e-Business Management* 1.

¹⁵⁷Robert Stokes, ‘Virtual Money Laundering: The Case of Bitcoin and the Linden Dollar’ (2012) 21 *Information & Communications Technology Law* 221, 224.

¹⁵⁸Ibid.

Virtual currencies are essentially currencies that are not issued by a government. The term ‘virtual currency’ is defined by the Financial Action Task Force (‘FATF’) as:¹⁵⁹

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.

Therefore, virtual currencies are considered currencies tradeable within a virtual world like Linden Dollars. On the other hand, the term ‘digital currency’ is defined by the FATF as: ‘A digital representation of either virtual currency (non-fiat) or e-money (fiat) and thus is often used interchangeably with the term virtual currency’.¹⁶⁰ However, Bitcoin is referred to as a digital currency because of its convertibility to traditional currencies through the use of exchange platforms. Both virtual and digital currencies differ from traditional money (notes and coins) as they are not recognised as legal tender. Virtual and digital currencies also differ from electronic payments because it is not centralised and regulated through governments.

Bitcoin, as a digital currency, is also divided into two categories, namely convertible and non-convertible digital currency. The FATF specified these two types of digital currencies because Bitcoin exists within a market but is not physically capable of being converted.¹⁶¹ According to the FATF, a ‘convertible’ digital currency ‘has an equivalent value in real currency and can be exchanged back-and-forth for real currency’,¹⁶² for example, Bitcoin. On the other hand, a ‘non-convertible’ digital currency can be defined as ‘a particular virtual domain or world, such as a Massively

¹⁵⁹Financial Action Task Force, *Virtual Currencies, Key Definitions and Potential AML/CFT Risks* (June 2014), FATF Report <<http://www.fatf-gafi.org/media/fatf/documents/reports/virtual-currency-key-definitions-and-potential-aml-cft-risks.pdf/>>.

¹⁶⁰Ibid. The Australian Securities Investment Commission (ASIC) refers to virtual currencies as ‘digital currency or electronic money. They do not physically exist as coins or notes. Some people use virtual currency to buy goods and services online without incurring large transaction fees or charges’ – Australian Securities Investment Commission, *Virtual Currencies* <<https://www.moneysmart.gov.au/investing/investment-warnings/virtual-currencies/>>.

¹⁶¹FATF, above n 159, 4.

¹⁶²Ibid.

Multiplayer Online Role-Playing Game (MMORPG) or Amazon.com, and under the rules governing its use, cannot be exchanged for fiat currency'.¹⁶³

Although there are now many forms and categories of digital currencies such as 'Altcoins', which include Ripple, Peer Coin, Lite-coin; Zerocoin; Anoncoin and Dogecoin,¹⁶⁴ the focus of this thesis is on Bitcoin as it is one of the most widely used digital currencies.¹⁶⁵ Virtual and digital currencies are the new step to revolutionising the existence of money and an overview will specifically be provided on Bitcoin.

2.4.1 *The Development and Use of Bitcoin*

Bitcoin has been poetically described as 'a masterpiece of technology – a work of genius on par with the Mona Lisa'¹⁶⁶ and as a 'phenomenal invention'.¹⁶⁷ The invention of Bitcoin contains many features that may be beneficial to businesses, consumers and possibly banking institutions. Bitcoin as a 'phenomenal invention' is summarised by Tucker as follows:¹⁶⁸

There is something special about Bitcoin that makes it inherently resistant to government control. It is built on code. It lives in the cloud. It is globalized and detached from the nation state, has no own institutional owner, operates peer to peer, and its transactions are inherently pseudonymous. It cannot be regulated in the same way as the stock market, government currency markets, insurance, or other financial sectors.

¹⁶³Ibid.

¹⁶⁴Perlman, above n 84. See also Nathaniel Popper, 'In Bitcoin's Orbit: Rival Virtual Currencies vie for Acceptance', *New York Times* (online), 24 November 2013 <http://dealbook.nytimes.com/2013/11/24/in-bitcoins-orbit-rival-virtual-currencies-vie-for-acceptance/?_r=0>.

¹⁶⁵See in general David Lee Chuen, *Handbook of Digital Currency: Bitcoin, Innovation, Financial Instruments, and Big Data* (Academic Press, 2015) 310-311; Chris Rose, 'The Evolution of Digital Currencies: Bitcoin, A Cryptocurrency Causing a Monetary Revolution' (2015) 14(4) *International Business and Economics Research Journal* 617.

¹⁶⁶Joshua Doguet, 'The Nature of the Form: Legal and Regulatory Issues Surrounding the Bitcoin Digital Currency System' (2013) 73 *Louisiana Law Review* 1119, 1119.

¹⁶⁷Reuben Grinberg, 'Bitcoin: An Innovative Alternative Digital Currency' (2011) 4 *Hastings Science & Technology Law Journal* 159, 161.

¹⁶⁸Jeffrey Tucker, *Should Bitcoin Be Regulated Like Dollars* (May 2013) in Daniela Sonderegger, 'A Regulatory and Economic Perplexity: Bitcoin Needs Just a Bit of Regulation' (2015) 47 *Washington University Journal of Law and Policy* 175, 175.

In 2009, Bitcoin was introduced to the world by an individual using the pseudonym Satoshi Nakamoto.¹⁶⁹ However, in 2016, media reports suggested that the founder and inventor of Bitcoin is Craig Wright, an Australian entrepreneur; however, Mr Wright has not yet provided any adequate evidence of his identity as Satoshi Nakamoto.¹⁷⁰ The true identity of Bitcoin remains to be seen. In general, Bitcoin can be described as a ‘digital currency’.¹⁷¹ It is referred to as a decentralised payment system that makes use of a peer-to-peer network when making payments.¹⁷² Peer-to-peer networks can be defined as ‘distributed systems consisting of interconnected nodes able to self-organize into network topologies with the purpose of sharing resources ... without requiring the intermediation or support of global centralized server or authority’.¹⁷³ Therefore, a complex mathematical code is used to make sharing of resources, specifically payments, between users possible without the intervention of a third-party banking institution.¹⁷⁴ It is therefore an alternative way of banking to using EFTs. It is a system that uses pseudonyms and cryptography¹⁷⁵ in order to make these online payments.¹⁷⁶ Therefore, Satoshi Nakamoto’s aim, supposedly, was to remove the third party and any trust in the three-way party transaction.¹⁷⁷

¹⁶⁹Noel Yahanpath and Zeb Wilton, ‘Virtual Money: Betting on Bitcoin’ (2014) 17(1) *University of Auckland Business Review* 37, 38.

¹⁷⁰Australian Federal Police, ‘Bitcoin’s Self-proclaimed Founder Backtracks, Apologises’, *News.com.au* (online), May 2016

<<http://www.news.com.au/technology/innovation/inventions/bitcoins-selfproclaimed-founder-backtracks-apologises/news-story/abb955a548eb506e7a835e8b499c6e06>>; John McDuling, Jessica Sier, Rachel Olding and Ben Grubb, ‘Police Raid Home of Suspected Bitcoin Mastermind’, *Sydney Morning Herald* (online), 9 December 2015 <<http://www.smh.com.au/business/bitcoin-founder-could-definitely-be-australian-20151209-gljc73.html>>; Brett Molina, ‘Australian Claims He is the Founder of Bitcoin’, *USA Today* (online), May 2016 <<http://www.usatoday.com/story/tech/2016/05/02/bitcoin-founder-identified/83813744/>>.

¹⁷¹Grinberg, above n 167, 162.

¹⁷²Nicole Swartz, ‘Bursting the Bitcoin Bubble: The Case to Regulate Digital Currency as a Security or Commodity’ (2014) 17 *Tulane Journal of Technology and Intellectual Property* 319, 320.

¹⁷³Stephanos Androutsellis-Theotokis and Diomidis Spinellis, ‘A Survey of Peer-to-Peer Content Distribution Technologies’ (2004) 36 *ACM Computing Surveys* 335, 337.

¹⁷⁴See, eg, Jeffrey Simser, ‘Bitcoin and Modern Alchemy: In Code We Trust’ (2015) 22 *Journal of Financial Crime* 156-169.

¹⁷⁵Makes use of mathematical equations to transfer money. A 64-digit algorithm needs to be solved in order to obtain at least 50 bitcoins in a transaction.

¹⁷⁶Mann, above n 21. See also Catherine Christopher, ‘Why on Earth do People use Bitcoin?’ (2014) 2(1) *Business & Bankruptcy Law Journal* 1-3. After 2010, the first pizza could be bought. The value was \$25 in exchange for 10.000 BTC – Loredana Maftai, ‘Bitcoin – Between Legal and Informal’ (Working Paper VI, University of Iași, Romania, 2013) 53, 57.

¹⁷⁷Doguet, above n 166, 1122.

One of the parties in the Bitcoin system is known as an exchanger. For a user to exchange their Bitcoins to Australian dollars, the exchange must occur through the exchanger. Therefore, the exchanger is ‘a person or entity engaged as a business in the exchange of virtual currency for real currency, funds, or other forms of virtual currency and also precious metals, and vice versa, for a fee (commission)’.¹⁷⁸ Individuals who carry on the business with digital currencies such as Bitcoin include web hosts, casinos who trade online, auction sites and firms who consult on technology.¹⁷⁹ Also, some small retail businesses in Australia accept Bitcoin as payment, for example, to buy a coffee, a meal or gym memberships.¹⁸⁰ This illustrates the diverse use of Bitcoin by businesses who accept it as a payment system to customers and other businesses.

Furthermore, for a business or consumer to access Bitcoin, whether buying, selling or mining, exchange platforms are used to exchange traditional money to Bitcoin and vice versa. One of the largest exchange platforms to date was Mt. Gox, which dealt with 80 per cent of the Bitcoin transactions globally.¹⁸¹ However, Mt. Gox, which was operated by Mark Karpeles, filed for bankruptcy in 2014 because of an alleged hacking incident.¹⁸² This caused Mt. Gox to lose around 750 000 of its users Bitcoins. One of the main disadvantages of using Bitcoin (as will be discussed later) is that these transactions are irreversible and therefore users need to be very cautious when using Bitcoins in transactions.

Apart from the Mt. Gox exchange platform, Grinberg indicates that numerous other platforms exist that can be used to access current Bitcoin exchange rates. These include Bitcoin Watch, which provides information on currency exchange values on Bitcoin; Bitcoin Block Explorer, which enables the user to search transactions used

¹⁷⁸FATF, above n 159, 7.

¹⁷⁹Grinberg, above n 167, 165.

¹⁸⁰Chris Pash, ‘Here’s Where You Can Spend Bitcoin in Australia, And What You Can Buy’, *Business Insider Australia* (online), July 2014 <<http://www.businessinsider.com.au/where-to-spend-bitcoin-in-australia-2014-7>>. Some of the businesses include Forsyth Real Estate, Hero Subs and The Little Mule. Some businesses have also offered to pay their employees in Bitcoin and accordingly get taxed as set out by the Australian Tax Organisation.

¹⁸¹Aaron Lindquist, ‘Funny Money: Why Bitcoin does not Warrant Increased Governmental Regulation’ (2015) 1 *Regent Journal of Global Justice and Public Policy* 79, 83.

¹⁸²Brett Wolf and Emily Flitter, *Mt Gox: The Brief Reign of Bitcoin's Top Exchange* (28 February 2014) Reuters <<http://www.reuters.com/article/us-bitcoin-mtgox-insight-idUSBREA1R06C20140228>>.

for a certain address; and Bitcoin Mail, which allows users to send Bitcoins via email.¹⁸³ This thesis will not discuss these different types of exchange platforms; however, Mt. Gox will be discussed in Chapter 3.

Accessing Bitcoin may seem like an uncomplicated process; however, Bitcoins are not traded through traditional banking but through a process called ‘mining’ where users open electronic wallets to store their Bitcoins, and is effectively seen as a stand-alone payment system.¹⁸⁴ In brief, the ‘mining’ process works as follows.¹⁸⁵ A computer with special software will ‘mine’ or create a Bitcoin using specific mathematical calculations. Baros compares this mining process to mining gold and adds that ‘mining is a competitive process in which Bitcoin “miners” use special network processors and hardware to process transactions, secure the network, and solve algorithms that generate new Bitcoin’.¹⁸⁶ Furthermore, the process can be explained in the following passage:¹⁸⁷

A user, wishing to make a payment, issues payment instructions that are disseminated across the network of other users. Standard cryptographic techniques [mining] make it possible for users to verify that the transaction is valid – that the would-be payer owns the currency in question. Special users in the network, known as ‘miners’, gather together blocks of transactions and compete to verify them. In return for this service, miners that successfully verify a block of transactions receive both an allocation of newly created currency and any transaction fees offered by parties to the transactions under question.

¹⁸³Grinberg, above n 167, 167. See also Virtual Currency Exchange <<http://virtual-currency-exchange.com/virtual-currency-exchange/>>.

¹⁸⁴Cara R Baros, ‘Barter, Bearer, and Bitcoin: The Likely Future of Stateless Virtual Money’ (2014) 23 *University of Miami Business Law Review* 201, 212.

¹⁸⁵See Chris Rose, ‘The Evolution of Digital Currencies: Bitcoin, A Cryptocurrency Causing a Monetary Revolution’ (2015) 14(4) *International Business and Economics Research Journal* 617; Rainer Böhme, Nicolas Christin, Benjamin Edelman and Tyler Moore, ‘Bitcoin’ (2014) *Journal of Economic Perspectives* 6-7; LS, ‘How Bitcoin Mining Works’, *The Economist* (online), January 2015 <<http://www.economist.com/blogs/economist-explains/2015/01/economist-explains-11>>; Ken Tindell, ‘Geeks Love the Bitcoin Phenomenon Like They Loved the Internet in 1995’, *Business Insider Australia* (online), April 2013 <<http://www.businessinsider.com.au/how-bitcoins-are-mined-and-used-2013-4?r=US&IR=T>>.

¹⁸⁶Cara Baros, ‘Barter, Bearer, and Bitcoin: The Likely Future of Stateless Virtual Money’ (2015) 23 *Miami Business Law Review* 201, 213.

¹⁸⁷Robleh Ali, John Barrdear, Roger Clews and James Southgate, ‘Innovations in Payment Technologies and the Emergence of Digital Currencies’ (2014) 54(3) *Quarterly Bulletin* 266.

This process is further explained by the European Central Bank as mathematical calculations in the mining process where ‘bitcoins are divisible to eight decimal places enabling their use in any kind of transaction, regardless of the value’.¹⁸⁸ Therefore, once the algorithm is solved, the software network will mark the transaction as a ‘block’.¹⁸⁹ The ‘block’ is only a record-keeper of all the transactions solved. The ‘Blockchain’ is also a public record-keeping system of all Bitcoin transactions shared between all Bitcoin miners. This Blockchain was included into the ‘mining’ system in order to keep track of transactions and circulation of coins.¹⁹⁰ The Blockchain will then send the ‘miner’ a confirmation that the transaction occurred. This confirmation only reveals to the miner that the transaction was processed.¹⁹¹

As soon as the confirmation has been sent and confirmed, a private key will be sent to the Bitcoin wallet, which is similar to a bank account on the computer.¹⁹² This private key provides the user with the necessary rights to spend and trade the Bitcoins within that account. One of the features of the Bitcoin system is that the private key is sent directly to the user’s wallet and is not stored on the Blockchain, which means users are anonymous in their dealings with each other.¹⁹³ However, Bitcoin also operates on a public Blockchain network and includes a public key.¹⁹⁴ Therefore, according to Luther and Olson, Bitcoin ‘functions as a public record-keeping device’.¹⁹⁵ The public and private keys are different in that the public key will be displayed on the public ledger (record) whereas the private key is used to make anonymous payments in Bitcoin. The operation of a Bitcoin payment will be further illustrated in Chapter 3. Once the Bitcoins are sent to the user’s wallet and the user has access to the private key, they can make use of different exchange

¹⁸⁸European Central Bank (ECB), *Virtual Currency Schemes* (2012) <<https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf>>.

¹⁸⁹*Ibid.*

¹⁹⁰*Ibid.* See also Stephen Small, ‘Bitcoin: The Napster of Currency’ (2015) 37 *Houston Journal of International Law* 581, 582.

¹⁹¹*Ibid.* 213.

¹⁹²*Ibid.* See also Danton Bryans, ‘Bitcoin and Money Laundering: Mining for an Effective Solution’ (2014) 89 *Indiana Law Journal* 441, 443.

¹⁹³*Ibid.*

¹⁹⁴Franco Pedro, *Understanding Bitcoin* (Wiley, 2014) 56.

¹⁹⁵William Luther and Josiah Olson, ‘Bitcoin is Memory’ (2013) 3(3) *Journal of Prices and Markets* 22.

platforms to store and exchange their Bitcoins.¹⁹⁶ Once the Bitcoins are sent to a wallet, it is necessary to exchange the Bitcoins to, for example, Australian dollars on an exchange platform. Although the process of ‘mining’ is needed to generate and trade Bitcoins, the supply of Bitcoins is limited to 21 million. There could be a number of reasons for this but mainly Bitcoin is capped because it is meant to only have value for a certain period of time before it becomes devalued.¹⁹⁷ There are currently 16 million Bitcoins in circulation.¹⁹⁸ The limited time frame of circulation is one of the factors that needs to be considered when dealing with regulation of Bitcoin.

As illustrated above, once Bitcoins have been processed through mining, its circulation is captured onto a Blockchain system in order to trace the amount of Bitcoin in circulation. However, there is a difference between Bitcoin and Blockchain in that the Blockchain is not dependent on Bitcoin. Therefore, Blockchain technology is readily available to the banking industry to use without acknowledging Bitcoin as a payment system. According to Tyle and Kausai:¹⁹⁹

The elegance of the Blockchain is that it obviates the need for a central authority to verify trust and the transfer of value. It transfers power and control from large entities to the many, enabling safe, fast, cheaper transactions despite the fact that we may not know the entities we are dealing with.

Likewise, Kiviat describes Blockchain as ‘trustless technology’ and because ‘the Blockchain is an authentication and verification technology, it can enable more efficient title transfers and ownership verification’.²⁰⁰ Therefore, as a fast and cheap method for transactions, Blockchain has been in the limelight for the past couple of years and companies, even banking institutions, are considering using blockchain

¹⁹⁶Some exchange platforms include Flexcoin and Mt Gox, but both these platforms have been shut down due to Bitcoins disappearing from the system as a result of online hacking.

¹⁹⁷T.S, ‘How does Bitcoin Work?’, *The Economist* (online), 11 April 2013 <<http://www.economist.com/bitcoinexplained>>.

¹⁹⁸*Bitcoin – Total XBT in Circulation* (2015) Coindesk <<http://www.coindesk.com/data/bitcoin-total-circulation/>>.

¹⁹⁹Sheel Tyle and Mohit Kaushal, *The Blockchain: What It Is and Why It Matters* (13 January 2015) Brookings <<https://www.brookings.edu/blog/techtank/2015/01/13/the-blockchain-what-it-is-and-why-it-matters/>>.

²⁰⁰Trevor Kiviat, ‘Beyond Bitcoin: Issues in Regulating Blockchain Transactions’ (2016) 65 *Duke Law Journal* 569, 574.

technology as a way of banking and keeping customer records centralised on one system.²⁰¹ Anyone can use Blockchain and all transactions are recorded on a public ledger, which is permanently recorded for all users to see.²⁰² There is also a popular growth of Blockchain with banking institutions²⁰³ as this is not dependent on Bitcoin and therefore a popular alternative to banking (for a discussion on Blockchain and the banking industry, see Chapter 3).

2.4.2 Characteristics of Bitcoin

One of the aims of this thesis is to explain what the nature and legal status of Bitcoin is and how it features in the banking industry. As already noted in this thesis, Bitcoin has distinct features that make it attractive for businesses and consumers to use as a payment system; however, it is not regulated as a traditional payment system or as legal tender and businesses and consumers who do not deal with Bitcoin as a payment system are not required to accept it from other persons dealing with it.²⁰⁴ Unlike traditional payment systems, Bitcoin has the following characteristics that make it different from any government-made currency:²⁰⁵

- (i) It is decentralised, which means that it is not controlled in any manner through a centralised body such as the RBA and money will keep on producing.
- (ii) It is easily accessible; fast and transaction fees are very low.
- (iii) Bitcoin users are anonymous as they use pseudonyms and private keys when making payments.
- (iv) Bitcoin payments are irreversible, which means that when a user makes a payment and it is to the wrong wallet account, that user will not get the money back as the transaction is irreversible and no chargebacks apply.
- (v) There is no double-spending.

²⁰¹Tyle and Kaushal, above n 199.

²⁰²Kevin Petrasic and Matthew Bornfreund, *Beyond Bitcoin: The Blockchain Revolution in Financial Services* (7 March 2016) White & Case <<http://www.whitecase.com/publications/insight/beyond-bitcoin-blockchain-revolution-financial-services>>.

²⁰³Ibid. See also Michael Crosby, Pradhan Pattanayak, Sanjeev Verma and Vignesh Kalyanaraman, *Blockchain Technology: Beyond Bitcoin* (16 October 2015) Sutardja Center for Entrepreneurship & Technology Technical Report <<http://scet.berkeley.edu/wp-content/uploads/BlockchainPaper.pdf>>.

²⁰⁴Nicole Swartz, 'Bursting the Bitcoin Bubble: The Case to Regulate Digital Currency as a Security or Commodity' (2014) 17 *Tulane Journal of Technology and Intellectual Property* 319, 320.

²⁰⁵Note, *What is Bitcoin?* (2015) Coindesk <<http://www.coindesk.com/information/what-is-bitcoin/>>.

One distinctive feature of Bitcoin is that Bitcoin transactions are protected against double-spending.²⁰⁶ As mentioned, Bitcoin transactions are decentralised and include peer-to-peer transactions, which mean that a central authority is removed as the middle-man in authorising payments. However, the difficulty with double-spending is an essential characteristic that any virtual or digital currency such as Bitcoin will face. According to Wallace, double-spending with regard to virtual and digital currencies can be described as follows:²⁰⁷

If a [virtual] dollar is just information, free from the corporeal structures of paper and metal, what's to prevent people from copying and pasting it as easily as a chunk of text and 'spending' it as many times as they want?

Therefore, Bitcoin transactions are prevented from double-spending through public-key cryptography. The user is allocated two keys, one private and one public, and when the user signs for the transaction, this transaction can be verified by the public key that is linked to the private key of that user.²⁰⁸ As a result, 'public-key cryptography ensures that all computers in the network have a constantly updated and verified record of all transactions within the Bitcoin network, which prevents double-spending and fraud'.²⁰⁹ Double-spending is a significant issue with regard to tax evasion which will be discussed further in Chapter 3.

On the flip side to virtual and digital currencies, physical currencies already have a built-in solution for double-spending. Therefore, if someone wants to buy a drink with a physical dollar, then that person will no longer be in possession of that dollar and cannot spend the same dollar again to buy another drink.²¹⁰ In this case, Bitcoin transactions do not have a physical presence and as a result, Bitcoin users focus on solving this problem by 'involving a central clearinghouse to keep a real-time ledger

²⁰⁶Kevin Tu and Michael Meredith, 'Rethinking Virtual Currency Regulation in the Bitcoin Age' (2015) 90 *Washington Law Review* 271, 279.

²⁰⁷Benjamin Wallace, *The Rise and Fall of Bitcoin* (2011) WIRED
<http://www.wired.com/magazine/2011/11/mf_bitcoin/>.

²⁰⁸Jerry Brito and Andrea Castillo, *Bitcoin: A Primer for Policymakers* (Mercatus Centre, 2013) 5.

²⁰⁹*Ibid.*

²¹⁰Tu and Meredith, above n 206, 204.

of all transactions involving the virtual currency'.²¹¹ This type of clearinghouse is operated by the users themselves, which is outside the authority of the banking institutions. These Bitcoin transactions are very much dependent upon trust of the users to authenticate these ledgers.²¹²

Virtual and digital currencies such as Bitcoin are used as a payment system because 'it is not necessarily seen as a replacement for traditional currencies, but rather as a new payment system'.²¹³ Over the past decade there has been an increase in Bitcoin operators and Bitcoin transactions.²¹⁴ This can be attributed to factors such as low transaction costs, anonymity and privacy. To understand why there is seemingly an increase in the use of Bitcoin transactions, it is useful to consider the benefits of Bitcoin and how it affects businesses and consumers within daily transactions. However, despite the advantages of using Bitcoin, there are also disadvantages linked to the use of Bitcoin, which will be examined accordingly.

2.4.3 *Advantages and Disadvantages of Bitcoin*

Digital and virtual currencies have been gaining popularity through the expansion of different digital coins.²¹⁵ With the popularity of Bitcoin increasing, various advantages and disadvantages can be identified when making use of this payment network. The possible benefits and pitfalls can be considered as follows:²¹⁶

New technologies, particularly network and cloud-based technologies such as the block chain, offer the potential for valuable innovation and competition. However, payments system regulation must balance competing policy objectives. It must maintain a balance between stability, efficiency and competition-driven innovation while ensuring confidence and integrity.

²¹¹Wallace, above n 207.

²¹²Doguet, above n 167, 1119.

²¹³Brito and Castillo, above n 208, 14.

²¹⁴Kaye Scholer, *An Introduction to Bitcoin and Blockchain Technology* (February 2016) <<http://www.kayescholer.com/docs/IntrotoBitcoinandBlockchainTechnology.pdf>>.

²¹⁵See in general, Stephen Small, 'Bitcoin: The Napster of Currency' (2015) 37 *Houston Journal of International Law* 581.

²¹⁶Australian Payments Clearing Association, Submission 43 to the Senate Economics References Committee, *Inquiry into Digital Currency*, November 2014, 3 <http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Submissions>.

Therefore, new technologies such as Bitcoin need to focus on maintaining a level of stability and efficiency in the same way existing electronic payments do, which will display the advantages of Bitcoin. This discussion will also take into account the weakness of the Bitcoin system and how this affects businesses and consumers using Bitcoin as a payment system.

2.4.3.1 Advantages

This section provides a brief overview of the key advantages of the use of Bitcoin.²¹⁷

a) No Appropriation of Funds

When transactions are conducted using Bitcoin, a government cannot seize or freeze any Bitcoin wallets or funds.²¹⁸ This is because, as mentioned, Bitcoin is a decentralised digital currency. Andreessen notes the following on the Bitcoin network being uncontrolled by a third party:²¹⁹

Bitcoin gives us, for the first time, a way for one Internet user to transfer a unique piece of digital property to another Internet user, such that the transfer is guaranteed to be safe and secure ... All these are exchanged through a distributed network of trust that *does not require or rely upon a central intermediary like a bank or broker*. What kinds of digital property might be transferred in this way? Think about digital signatures, digital contracts, digital keys (to physical locks, or to online lockers), digital ownership of physical assets such as cars and houses, digital stocks and bonds ... and digital money.

Therefore, Bitcoin is free from government intrusion and users of Bitcoin who want to send large amounts of money, for example, internationally, can accept Bitcoin as a payment method.²²⁰ Furthermore, as already pointed out, Bitcoin is not assisted by a third party like the RBA and therefore government interference is not relevant unless

²¹⁷Stanford University, Advantages of Bitcoin: Decentralized, Peer-to-Peer, Cryptocurrency <<http://cs.stanford.edu/people/eroberts/cs201/projects/2010-11/DigitalCurrencies/advantages/index.html>>.

²¹⁸Ibid.

²¹⁹Marc Andreessen, 'Why Bitcoin Matters', *New York Times* (online), 21 January 2014 <<http://dealbook.nytimes.com/2014/01/21/why-bitcoin-matters/?smid=pl-share>>.

²²⁰Nicolas Plassaras, 'Regulating Digital Currencies: Bringing Bitcoin within the Reach of the IMF' (2013) *Chicago Journal of International Law* 377, 387.

it is regulated in way that supports Bitcoin to be recognised as legal tender and hence a legal currency in Australia.

b) Privacy and Anonymity

Bitcoin transactions are primarily conducted in private through the use of pseudonyms, and transactions can be carried out in a user's private time in any geographical area without entering a banking institution.²²¹ Users therefore remain anonymous as each user has a private key that only displays their key number and not a name. Anonymity can be described in two ways. On the one hand, Grinberg states that 'all Bitcoin transactions are public, but are considered anonymous because nothing ties individuals or organisations to the accounts that are identified in the transactions'.²²² On the other hand, Velde suggests that 'many ingenious features of bitcoin try to emulate ... properties of cash, but do so at some costs. Admittedly, there ... are ways to make the wallet hard to trace back to its owner, but these require additional efforts'.²²³ Therefore, the parties in the Bitcoin transaction are not mentioned by name, but rather by a Bitcoin address.²²⁴ This is one of the main advantages and incentives for using Bitcoin.

c) Minimal or No Transaction Costs

When payments are made with Bitcoin, there are minimal or no transaction costs involved.²²⁵ This is because Bitcoin, as a digital currency, is decentralised with no involvement of a third party, such as the RBA, or banking institutions charging high fees for customer transactions.²²⁶ Furthermore, the Bitcoin network is also free to use. As a result, organisations such as Consultative Group for Assisting the Poor and the World Bank have been considering using digital currencies such as Bitcoin because of this beneficial feature.²²⁷

²²¹Grinberg, above n 167.

²²²Ibid 179.

²²³Francois Velde, 'Bitcoin: A Primer' (2013) *Federal Reserve Bank of Chicago Letter No 317*, 3.

²²⁴Ibid.

²²⁵Grinberg, above n 167.

²²⁶Ibid. According to Trautman, the transaction costs are so minimal due to there not being a third party (a bank) involved which means costs such as credit card charges can be avoided within bitcoin transactions – Laurence Trautman, 'Virtual Currencies; Bitcoin & What Now After Liberty Reserve, Silk Road, and Mt. Gox?' (2014) XX(4) *Richmond Journal of Law & Technology* 1, 59.

²²⁷Parliament of Australia, The Senate, Economics References Committee Report, *Digital Currency – Game Changer or Bit Player* (August 2015) 19

Similarly, set-ups such as BitPesa provide affordable access to making transactions in order to assist people who cannot afford traditional banking fees when making an international payment.²²⁸ This advantage may lead to banking institutions reducing their banking and transaction fees as Bitcoin reaches popularity.²²⁹

2.4.3.2 Disadvantages

The main disadvantages in using Bitcoin are limited acceptance, instability of the network, fluctuations in valuations, irreversibility of transactions and misuse of the Bitcoin network for criminal activities.²³⁰

a) *Instability of Bitcoin*

Even though Bitcoin has been increasingly used by businesses and consumers as a payment method,²³¹ the fact that Bitcoin is not accepted as legal tender by governments indicates that not all people in society are in a position to trust in these transactions, which can lead to it being a poor and unstable currency.²³² The main issue with acceptability of Bitcoin is that the identity of the users are not made known, which means that traditional banking institutions still remain the most preferred avenue through which banking transactions are conducted.²³³ Therefore, businesses and consumers who do not have Bitcoin accounts are not obliged to accept it as payment from someone who is using it as a payment method.

<http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Report>.

²²⁸Ibid.

²²⁹Rainer Böhme, Nicolas Christin, Benjamin Edelman and Tyler Moore, 'Bitcoin: Economics, Technology and Governance' (2015) 29(2) *Journal of Economic Perspectives* 213, 224-225.

²³⁰Stanford University, *Advantages of Bitcoin: Decentralized, Peer-to-Peer, Cryptocurrency* (November 2010)

<<http://cs.stanford.edu/people/eroberts/cs201/projects/2010-11/DigitalCurrencies/advantages/index.html>>.

²³¹Stanford University, *Disadvantages of Bitcoin: Decentralized, Peer-to-Peer, Cryptocurrency* (November 2010)

<<http://cs.stanford.edu/people/eroberts/cs201/projects/2010-11/DigitalCurrencies/disadvantages/index.html>>.

²³²Ibid. See also Tyler Durden, *Bitcoin Crashes, Loses Half of its Value in Two Days* (7 December 2013) Zero Hedge <<http://www.zerohedge.com/news/2013-12-07/bitcoin-crashes-loses-half-its-value-two-days>>.

²³³Olujoke Akindemowo, 'The Fading Rustle, Chink and Jingle: Electronic Value and the Concept of Money' (1998) 21 *University of New South Wales Law Journal* 466, 481.

Furthermore, the Finance Discipline Group at the University of Technology in Sydney indicated that Bitcoin is more appreciated within an investment sphere rather than a currency or ‘medium of exchange’.²³⁴ Therefore, selected Bitcoin advocates, like the Finance Discipline Group, argue that Bitcoin is not a threat to the banking industry because it is used as an investment rather than a means of payment. However, this thesis argues that Bitcoin is used as a form of payment and the volatile status of Bitcoin may influence the stability of Bitcoin as a regulated legal currency.

b) *Ebb and Flow Cycle of Value*

Bitcoin valuations vary from day to day. Unlike the value of a \$5 note for instance, Bitcoins do not have a set currency value assigned to it as a payment system. This means that Bitcoin exchange rates have an ebb and flow cycle.²³⁵ This potentially becomes difficult when a person wants to store Bitcoins, as the exchange rate will not stay the same.²³⁶ This raises concerns about whether Bitcoin should be regulated as a currency.²³⁷ It is worthwhile to note that Bitcoin is also popular as an investment type scheme, despite it being used in daily activities; however, investors should be aware of the changing nature of Bitcoin’s exchange rate.²³⁸ This is because businesses and consumers still use traditional payment systems more than Bitcoin transactions in order to retain the value as a currency. Even though Bitcoin payments, as mentioned above, are being used more because of its private and anonymous characteristics as well as no double-spending on transactions, the ebb and flow of the value attached to Bitcoin is considered a vulnerability when compared to traditional payment systems such as EFTs.²³⁹

²³⁴Finance Discipline Group, Submission 7 to the Senate Economics References Committee, *Inquiry into Digital Currency*, December 2014, 12
<http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Submissions>.

²³⁵Jeremy Papp, ‘A Medium of Exchange for an Internet Age: How to Regulate Bitcoin for the Growth of E-Commerce’ (2015) 15 *Pittsburgh Journal of Technology Law and Policy* 33, 38-39.

²³⁶See Joon Wong, *China's Market Dominance Poses Questions About Global Bitcoin Trading Flows* (2014) Coindesk
<<http://www.coindesk.com/chinese-markets-dominance-poses-questions-global-bitcoin-trading-flows/>>.

²³⁷See also Bob Swarup, *Why Bitcoin is Fated for Boom and Bust* (2014) Coindesk
<<http://www.coindesk.com/bitcoin-fated-boom-bust/>>.

²³⁸Catherine Martin Christopher, ‘Why on Earth do People Use Bitcoin?’ (2015) 2 *Business and Bankruptcy Law Journal* 1, 3-4.

²³⁹Kaye Scholer, above n 214, 6.

c) *Irreversible Transactions*

Currently there is limited protection for consumers who want to use Bitcoin as their preferred method of payment in regards to a mistaken payment.²⁴⁰ Because of the anonymity of Bitcoin, the transactions are irreversible, which means that once a payment has been made into an incorrect account, there will be no charge back as there is with regular banking transactions such as credit card transactions and ‘PayPass’.²⁴¹ Moore and Christin explain that ‘irrevocability makes any Bitcoin transaction involving one or more intermediaries subject to added risk, such as if the intermediary becomes insolvent or absconds with customer deposits’.²⁴²

Therefore, consumer protection plays a vital role when dealing with Bitcoin transactions and making consumers aware of the risks when using this payment system.²⁴³ Information regarding protection to consumers and businesses that use Bitcoin as a payment method should be provided through agencies such as ASIC and the ACCC.

d) *Criminal Activities*

Bitcoin is anonymous and decentralised (unregulated), and as such it is easier for people to use Bitcoin payments for illegal or illicit activities. These activities can include theft or fraud, money laundering, terrorist financing and tax evasion, to mention a few.²⁴⁴ Furthermore, as a result of Bitcoin’s decentralised nature, it is difficult for law enforcement to trace illegal activities and therefore ‘digital currencies ... are used in a way that perhaps would have been able to be used by

²⁴⁰See Primavera De Filippi, ‘Bitcoin: A Regulatory Nightmare to a Libertarian Dream’ (2014) 3(2) *Internet Policy Review* 286.

²⁴¹Derek Dion, ‘I’ll Gladly Trade You Two Bits on Tuesday for a Byte Today: Bitcoin, Regulating Fraud in the E-Economy of Hacker-Cash’ (2013) *University of Illinois Journal of Law Technology and Policy* 165, 168. See also Matt Rosoff, ‘This Investor Thinks Bitcoin Will Change EVERYTHING- Not Just Finance’, *Business Insider Australia* (online), December 2014 <<http://www.businessinsider.com.au/how-bitcoin-could-change-everything-not-just-finance-2014-12>>.

²⁴²Tyler Moore and Nicolas Christin, ‘Beware the Middleman: Empirical Analysis of Bitcoin-Exchange Risk’ (2013) in Ahmad-Reza Sadeghi (ed) et al, *Financial Cryptography and Data Security* (Springer, 2013) chap 3 <<http://fc13.ifca.ai/proc/1-2.pdf>>.

²⁴³See also David Swan, ‘Australia Should Go for Broke on Bitcoin’, *The Australian Business Review* (online), 5 December 2014 <<http://www.businessspectator.com.au/article/2014/12/5/technology/australia-should-go-broke-bitcoin>>.

²⁴⁴This is for example the cases against Silk Road and Liberty Reserve.

ordinary currencies'.²⁴⁵ An example of the illegal use of Bitcoin is the *Silk Road* case where a person could order drugs and other illicit goods on this website using Bitcoin.²⁴⁶ The national as well as international fight against these cyber-criminal activities is a challenge for governments and will be discussed in more detail in Chapter 3.²⁴⁷

Taking all the advantages and disadvantages into account, the question is whether Bitcoin can and should be considered a medium of exchange, unit of account and store of value when assessing the functions of money and whether it fulfils the definitions of legal tender and legal currency. This is relevant in order to determine whether virtual and digital currencies such as Bitcoin should be regulated as a legally accepted currency. When considering Bitcoin within the framework of money and legal tender, Brito and Castillo note that:²⁴⁸

Transactions on the Bitcoin network are not denominated in dollars or euros or yen as they are on PayPal, but are instead denominated in bitcoins. This makes it a virtual currency in addition to a decentralized payments network. The value of the currency is not derived from gold or government fiat, but from the value that people assign to it. The dollar value of a bitcoin is determined on an open market, just as is the exchange rate between different world currencies.

This explanation indicates that Bitcoin transactions cannot be associated with regular transactions in that value is given to Bitcoin and the Bitcoin network through the use of society and users on the network and not a government. Therefore, it is necessary to analyse the functions of money and then the status of legal tender against the characteristics of Bitcoin to determine whether Bitcoin is considered money and ultimately a legal currency.

²⁴⁵Parliament of Australia, above n 227, 24-25.

²⁴⁶See Chapter 3 for a full discussion on the *Silk Road* case.

²⁴⁷See Nicole Perloth, 'To Instil Love of Bitcoin, Backers Work to Make It Safe', *New York Times* (online), 1 April 2014 <<http://dealbook.nytimes.com/2014/04/01/to-instill-love-ofbitcoin-backers-work-to-make-it-safe/>>. See also Catherine Christopher, 'Whack-a-Mole: Why Prosecuting Digital Currency Exchanges Won't Stop Online Money Laundering' (2014) 18 *Lewis & Clark Law Review* 1.

²⁴⁸ECB, above n 188, 4.

2.4.4 Bitcoin and the Functions of Money

A key aim of this thesis is to determine the legal status of Bitcoin and whether it can be defined as money, which has implications for the regulation thereof as a legal currency. However, it is necessary to note that Bitcoin may function as money under one statute but not under the other. This is discussed in Chapter 3 when focusing on the legislation dealing with Bitcoin as a payment method. For the purposes of this section, the discussion will centre on whether Bitcoin fulfils the functions of money and, if so, whether it can be seen as a legally acceptable currency by governments.²⁴⁹

2.4.4.1 Medium of Exchange

Bitcoin can only fulfil the function of medium of exchange once it is accepted as a means of payment for any goods or services. Darling J contended that a medium of exchange exists when:²⁵⁰

That which passes freely from hand to hand throughout the community in final discharge of debts and full payment for commodities, being accepted equally without reference to the character or credit of the person who offers it and without the intention of the person who receives it to consume it or apply it to any other use than in turn to tender it to others in discharge of debts or payment for commodities.

Therefore, in order for Bitcoin to function as a medium of exchange, Davidson and Block note that ‘where a good ... was once valued only for its services in some direct use (either in consumption or production) becomes valued for its function in indirect exchange’²⁵¹ is an essential function. Furthermore, as Davidson and Block explain, ‘it follows that an object cannot be used as money unless, at the moment when its use as money begins, it already possesses an objective exchange-value based on some other use’.²⁵² Because Bitcoin had value attached to it before its

²⁴⁹Tara Mandjee, ‘Bitcoin, Its Legal Classification and Its Regulatory Framework’ (2014) 15 *Journal of Business and Securities Law* 1, 12.

²⁵⁰*Moss v Hancock* [1899] 2 QB 111, 116.

²⁵¹Laura Davidson and Walter Block, ‘Bitcoin, the Regression Theorem, and the Emergence of a New Medium of Exchange’ (2015) 18(3) *The Quarterly Journal of Austrian Economics* 311, 313. See also Ludwig von Mises, *The Theory of Money and Credit* (Yale University Press, 1953) 30.

²⁵²*Ibid* 318.

development as a form of payment, Bitcoin as an intangible good fulfils the function of medium of exchange.²⁵³

Furthermore, Graf explains that Bitcoin fulfils the function of medium of exchange as it was already used for value through networks and that there is no need for an object to be tangible in order to fulfil this function.²⁵⁴ This indicates that modern payment systems have developed in a way that medium of exchange does not necessarily need to be tangible and can include a digital payment network such as Bitcoin. Similarly, Tucker notes that Bitcoin is related to a payment system as it is attached to a Blockchain that controls the acceptance and selling of Bitcoin value.²⁵⁵

The use of Bitcoin is only regulated within some countries and to fulfil the function of medium of exchange on an international scale Bitcoin's value depends on the users buying digital currencies on exchange platforms.²⁵⁶ The one characteristic of Bitcoin is that it will devalue after it has reached its cap, nevertheless, and as seen from the discussion above, Bitcoin will fulfil the first function of money as medium of exchange purely because it is accepted as a means of payment by businesses and consumers.

2.4.4.2 Unit of Account

For Bitcoin to fulfil the function of unit of account, Bitcoins must be measured as a unit against the goods or services. According to Carlson, a unit of money 'expresses the entire universe of commodities ... All commodities are present in every single monetary unit'.²⁵⁷ One attractive characteristic of Bitcoin is that it is divisible and

²⁵³Ibid. See also William Barnett and Walter Block, 'Crash and Carry: Financial Intermediaries, the Intertemporal-Carry Trade, and Austrian Business Cycles' (2009) XI *Ethics & Politics* 455.

²⁵⁴Konrad Graf, *Bitcoins, The Regression Theorem, and that Curious but Unthreatening Empirical World* (27 February 2013) Blog <<http://www.konradsgraf.com/blog1/2013/2/27/in-depth-bitcoins-the-regression-theorem-and-that-curious-bu.html>>.

²⁵⁵Jeffrey Tucker, *Bitcoin and Mises's Regression Theorem* (September 2014) Liberty <<https://tucker.liberty.me/bitcoin-and-mises-regression-theorem/>>.

²⁵⁶Stephanie Lo and Christina Wang, *Bitcoin as Money* (September 2014) Federal Reserve Bank of Boston <<http://www.bostonfed.org/economic/current-policy-perspectives/2014/cpp1404.pdf>>.

²⁵⁷Richard Posner, 'Wealth Maximization Revisited' (1985) 2 *Notre Dame Journal of Law, Ethics and Public Policy* 85, 87 in David Carlson, 'Money as Measure' (2012) 33 *Cardozo Law Journal* 2531, 2543.

fungible, which is similar to electronic money.²⁵⁸ According to Barber, Boyen, Shi and Uzun, ‘this is an Achilles’ heel of (strongly anonymous) e-cash systems, because denominations had to be standardized to be un-linkable, which incidentally makes the computational cost of e-cash transactions linear in the amount’.²⁵⁹

However, because of the fluctuating rates of Bitcoin, it is sometimes difficult to know its exact price and therefore Bitcoin will always be measured against dollars or euros.²⁶⁰ It is therefore not a payment system where users can apply for credit cards or loans because of the fluctuating value and it not being recognised as legal tender by governments.²⁶¹ Bitcoins are mostly used within exchange platforms, but in the past couple of years, Bitcoin has somewhat increased in trading goods or services, which means that it can be assessed against some kind of unit.²⁶² One example is the Winkdex Index, which was created to track Bitcoin prices in order to maintain more security for investors.²⁶³ Therefore, even though Bitcoin rates do fluctuate, it can be seen as a unit of account when used as a payment system.

2.4.4.3 Store of Value

Lastly, money should have some kind of store of value. This function is often difficult to meet because the ‘value’ of Bitcoin is not physical and it therefore depends on how people accept the goods within a Bitcoin transaction.²⁶⁴ With Bitcoin transactions; however, the digital coins are stored electronically (in a wallet) and are not used immediately, which indicates that Bitcoin will be able to fulfil this function if there are some Bitcoins in reserve to be used later. The problem with Bitcoin transactions and this function is that the fluctuation in Bitcoin value can vary and depend on the recognition of Bitcoin by society. Therefore, the only exception is

²⁵⁸Simon Barber, Xavier Boyen, Elaine Shi and Ersin Uzun, ‘Bitter to Better - How to Make Bitcoin a Better Currency’ (2012) 7397 *Financial Cryptography and Financial Security* 3 <<https://crypto.stanford.edu/~xb/fc12/bitcoin.pdf>>.

²⁵⁹Ibid.

²⁶⁰Ibid.

²⁶¹Olivia George, ‘Bridging Bitcoin’s Gender Gap’ (2016) 12(2) *New York University Journal of Law and Business* 424, 440.

²⁶²See Jose Pagliery, *Bitcoin and the Future of Money* (Triumph Books, 2014) 3.

²⁶³Jose Pagliery, *Winklevoss Twins Launch the Bitcoin ‘Winkdex’* (20 February 2014) CNN Money <<http://money.cnn.com/2014/02/20/technology/winkdex-winklevoss/index.html>>.

²⁶⁴Daniel Krawisz, *Bitcoin as a Store of Value, Unit of Account, and Medium of Exchange* (2015) <<http://nakamotoinstitute.org/mempool/bitcoin-as-a-store-of-value-unit-of-account-and-medium-of-exchange/>>.

that volatile values can come between Bitcoin and the function of ‘store of value’.²⁶⁵ This is because most companies still work with a traditional currency and pay their employees with it and not necessarily Bitcoins. Butler and Boylan further note that:²⁶⁶

If the store of value function of all major currencies is substantially undermined, either through unsustainable fiscal and monetary policies around the globe or through a general unwillingness to allow meaningful relative currency appreciation, then investors are going to have to look for alternatives.

This suggests that, just as gold was used as store of value at some time, so too can Bitcoin be used as a store of value. However, the precariousness of Bitcoin is also in question as theft can occur within the ‘wallets’ where Bitcoins are stored.²⁶⁷ Even though Bitcoins have their shortfalls as mentioned, it can still be stored as an investment and profits can be made on it to boost capital growth.²⁶⁸

In relation to whether Bitcoin fulfils the functions of money and the definition for virtual currencies provided by the FATF, which states that it is: ‘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’.²⁶⁹ Therefore, Bitcoin is considered to be fulfilling the functions of money; however, the question that remains is whether Bitcoin is considered legal tender and therefore a legal currency.

²⁶⁵Davidson and Block, above note 251, 315.

²⁶⁶John Butler and Jon Boylan, ‘Is Money a Store of Value?’, *Financial Insider* (online), November 2010 <<http://www.financialsense.com/contributors/john-butler-john-boylan/is-money-a-store-of-value>>.

²⁶⁷Money from Nothing: Chronic Deflation may keep Bitcoin from Displacing its Fiat Rivals, *The Economist* (online), May 2014 <<http://www.economist.com/news/finance-and-economics/21599053-chronic-deflation-may-keep-bitcoin-displacing-its-fiat-rivals-money>>.

²⁶⁸See also Carter Dougherty, *Bitcoin Needs Tighter Rules than Banks, Say Prosecutors* (2014) Bloomberg <<http://www.bloomberg.com/news/2014-01-29/prosecutorwams-of-wild-west-without-bitcoin-oversight.html>>.

²⁶⁹Weatherford, above n 2.

2.5 Bitcoin as Legal Tender

Even though the FATF and this thesis argues that Bitcoin fulfils all three functions of money, it also states that Bitcoin does not have legal tender. McBride notes that ‘Legal tender underpins the vast number of ordinary payment transactions made every day, supporting the functioning of the economy at its most basic level – the exchange of goods and services for money’.²⁷⁰ Furthermore, legal tender status means ‘any official medium of payment recognised by law that can be used to extinguish a public or private debt, or meet a financial obligation’.²⁷¹ Therefore, a medium of exchange accepted by a government as a legal form of payment will act as legal tender according to law.²⁷² Taking into account s 16 of the *Currency Act* as well as ss 32 and 36(1) of the *Reserve Bank Act*, it is clear that Bitcoin is not recognised and accepted as legal tender by the Australian Government and it is argued that Bitcoin should be regulated as a commodity rather than a currency. Against this reasoning, it is more likely that Bitcoin should be regulated as a commodity rather than a currency. However, it is noteworthy that Bitcoin may be seen as ‘money’ under one statute and ‘commodity’ under another, as explained in Chapter 3. Currency can be defined as ‘a system of money in general use in a particular country’²⁷³ that involves the functions of money: medium of exchange, unit of account and store of value. On the other hand, a commodity can be defined as ‘a basic good used in commerce that is interchangeable with other commodities of the same type’ or ‘any good exchanged during commerce, which includes goods traded on a commodity exchange’.²⁷⁴ A commodity was mainly used in barter transactions and therefore Bitcoin would be better regulated under the bartering system because of its unique characteristics as an unregulated payment system.

In the case of *Shoreline Currencies (Aust) Pty Limited v Corporate Affairs Commission*,²⁷⁵ the court considered the meaning of ‘commodity’ through different interpretations under the *Futures Industry (New South Wales) Code* (NSW). The

²⁷⁰Nick McBride, ‘Payments and the Concepts of Legal Tender’ (2015) 78 *Reserve Bank of New Zealand Bulletin* 3, 3.

²⁷¹*Ibid.*

²⁷²*Currency Act 1965* (Cth) s 16.

²⁷³Oxford Dictionary, *Currency* <<http://www.oxforddictionaries.com/definition/english/currency>>.

²⁷⁴Investopedia, *Commodity* <<http://www.investopedia.com/terms/c/commodity.asp>>. See also discussion on Barter earlier in the Chapter.

²⁷⁵(1986) 11 NSWLR 22.

court referred to Mann's interpretation that 'commodity is not a legal, but an economic concept; a commodity is that which is an object of commercial intercourse. But the conception of a commodity has a relative character; it cannot be attributed to any particular thing as such'.²⁷⁶ The court similarly held that 'the word commodity... is a natural use of the word to apply it to foreign currency in circumstances in which it is dealt with in commercial transactions of the kind under consideration here'.²⁷⁷

Therefore, the interpretation of something as commodity depends on the circumstances and character of the object. The following comment was made regarding digital currencies (Bitcoin) being classified as a commodity:²⁷⁸

The proper way to think about Bitcoin for now is not as a currency, due to its lack of price-stability, but rather as a commodity ... Subtracting the industrial value of gold from the current trading value of gold yields the diversification value of gold, and this is the value addressable by Bitcoin over the long term.

Similarly, Casey argues that 'bitcoins are just an electronic abstraction. They can't be used for anything else, nor are they made of something that can be used for anything else'.²⁷⁹ Therefore, Bitcoins lack the characteristics of being accepted as legal tender, but it is argued that Bitcoin is considered a form of payment system without the necessary government regulation. As a result, Bitcoin fulfils the functions of money well in the sense that it refers to 'goods sold in the market with a quality and value uniform throughout the world' and as a result serve as a unit of account and store of value to users of Bitcoin.²⁸⁰ Lastly, although Bitcoin is not legal tender and is recognised as such, it is understood as commodity money, as noted by Wray and Meltzer,²⁸¹ because it is seen as an accepted form of exchange by users of

²⁷⁶Ibid.

²⁷⁷Ibid.

²⁷⁸Mandjee, above n 249, 24.

²⁷⁹Doug Casey, 'Doug Casey on Bitcoin and Currencies' on *CaseyResearch* (22 June 2011) <<https://www.caseyresearch.com/articles/doug-casey-bitcoin-and-currencies>>.

²⁸⁰Nikolei Kaplanov, 'Comment, Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation' (2012) 25 *Loyola Consumer Law Review* 111, 147.

²⁸¹Wray, above n 11.

Bitcoin.²⁸² By considering the characteristics, advantages, disadvantages and functions of Bitcoin as money, it is considered a form of money that is attached to a different kind of value than legal tender, but which is still used by businesses and consumers as a payment system.

2.6 Conclusion

The development of money from barter to virtual and digital currencies such as Bitcoin shows the advancement in technology and how society has adopted the advancement of payment systems. Bitcoin as a decentralised and anonymous payment system has several benefits for individual and business users with respect to the minimal transaction costs and privacy of the transactions. However, the disadvantages of Bitcoin cannot be ignored. The anonymous and decentralised characteristics of Bitcoin indicate that anyone can access the Bitcoin system and there is no regulatory mechanism in place.

As discussed above, it is evident that Bitcoin fulfils the functions of money but as it is not legal tender it cannot be considered a legal currency (which is accepted through government).²⁸³ However, the meaning of Bitcoin does coincide with the definition of ‘commodity’ and would be better regulated under this definition. Although commodities include tangible objects such as cowry shells, sugar and grain, technological developments have made it possible to include currencies within the definition of commodity.²⁸⁴ Therefore, Bitcoins can be used as a commodity as it will be interchangeable with goods and services and be accepted as a medium of exchange and unit with value attached to the transaction.²⁸⁵

²⁸²Mitchell Prentis, ‘Digital Metal: Regulating Bitcoin as a Commodity’ (2015) 66(2) *Case Western Reserve Law Review* 609, 628.

²⁸³As mentioned, according to the *Australian Reserve Bank Act 1959* (Cth) and the *Currency Act 1965* (Cth), Bitcoin is not recognised as legal tender, but this does not prohibit parties from agreeing to pay in Bitcoins. As of August 2014, the Australian Taxation Office (ATO) ruled on the implications of tax on Bitcoin transactions and also provided a detailed report on whether Bitcoin is seen as ‘money’ for tax purposes (see ATO ‘Draft Goods and Services Tax Ruling’ August 2014 <<http://law.ato.gov.au/atolaw/view.htm?DocID=DGS/GSTR2014D3/NAT/ATO/00001>>). The issue regarding tax will also be discussed in Chapter 3 of this thesis.

²⁸⁴Hooley, above n 99, 333. See also Jeffrey Snyder, ‘Bitcoin: Currency, Commodity or None of the Above?’ (16 October 2014) *The National Law Review* <<http://www.natlawreview.com/article/bitcoin-currency-commodity-or-none-above>>.

²⁸⁵For example, Japan was one of the first countries to accept Bitcoin as a commodity in order to regulate taxes and business trading accordingly - Ben McLannahan, ‘Japan to Class Bitcoin as Commodity’, *The Financial Times* (online), 14 February 2014

Furthermore, governments have not yet acknowledged whether Bitcoin should be regulated as a currency. This creates problems within the definition of ‘legal tender’. Even though Bitcoin fulfils the function of ‘money’ as a medium of exchange, unit of account and store of value, it is not recognised as a legal currency and it remains to be seen whether the Australian Government will recognise Bitcoin as such.

Currently in Australia the only regulatory framework in place for digital currencies, such as Bitcoin, is the tax ruling by the ATO. Within this ruling, the ATO explained that Bitcoin is currently seen as a commodity rather than a currency and should be treated akin to a barter transaction.²⁸⁶ The Financial System Inquiry (‘FSI’) also made the following statement regarding the regulation of Bitcoin in Australia: ‘Digital currencies are not currently widely used as a unit of account in Australia and as such may not be regarded as “money”. However, their use in payment systems could expand in the future’.²⁸⁷

With the rapid development and use of Bitcoin, it is inevitable that there are risks associated with its use, especially as it is largely unregulated. Currently, Bitcoin is seen as a commodity by the ATO and FSI and is considered to be a barter arrangement associated with many risks and challenges.

Therefore, this chapter has explained that Bitcoin is currently seen as a commodity rather than legal tender or a legal currency and should be regulated within this scope because of its unique barter characteristics. Based on this discussion, it is submitted that the Australian Government define Bitcoin’s broader regulatory position and how it will affect transactions for businesses and consumers alike.

It is reasonable to assert that if the Australian Government decides that e-commerce should transition to virtual and digital currencies such as Bitcoin, it is key that all sectors, whether economic, political or legal, should prepare for this change and ‘it is

<<http://www.ft.com/cms/s/0/a8381228-a5a0-11e3-8070-00144feab7de.html#axzz3aTbYTK9J>>.

²⁸⁶Australia Taxation Office, Treatment of Crypto-Currencies in Australia: Specifically, Bitcoin, Tax Ruling No. IT 2668.

²⁸⁷Australian Government, The Treasury, ‘Financial System Inquiry: Final Report’, 7 December 2014, 166 <<http://fsi.gov.au/publications/final-report/>>.

time to consider how to prepare, for that future is now, before practical problems arise'.²⁸⁸

Chapter 3 of this thesis will focus on the legal challenges and issues Bitcoin presents to governments, banking institutions, local businesses and individuals. The discussion will focus specifically on the distinction between traditional banking institutions and Bitcoin systems, which has implications for bank-customer relationships, money laundering and counter-terrorism financing legislation, with specific reference to the KYC principle and taxation laws regarding tax activities and tax evasion using Bitcoin transactions.

²⁸⁸Nicholas Plassaras, 'Regulating Digital Currencies: Bringing Bitcoin within the Reach of the IMF' (2014) 14 *Chicago Journal of International Law* 377, 407.

CHAPTER 3

LEGAL CHALLENGES AND RISKS OF BITCOIN TRANSACTIONS

3.1 Introduction

The discussion on the history and development of money and the legal meaning of money in Chapter 2 is important for understanding the legal status of virtual and digital currencies, and how payments within a new technological framework can be made. Chapter 2 further explained the advantages and disadvantages of Bitcoin when it is treated as a form of payment and how the distinctive characteristics of Bitcoin, like privacy and minimal costs of transactions, can make Bitcoin challenging for the banking industry. Bitcoin, with its unique characteristics, can lead to a number of legal challenges when used in transactions and this chapter will examine these challenges.

The legal challenges arising from the use of virtual and digital currencies such as Bitcoin, indicates the need for regulatory reform, which is reflected in the following statement by the Director of the Treasury Department's Financial Crimes Enforcement Network, Ms Jennifer Calvery, on the need for a developed regulatory model:¹

The decision to bring virtual currency within the scope of our regulatory framework should be viewed by those who respect and obey the basic rule of law as a positive development for this sector. It recognizes the innovation virtual currencies provide, and the benefits they might offer society.

Even though Bitcoin may be viewed as an innovative global phenomenon in transactions, there are a number of critical legal issues associated with its use. One aim of this thesis is to examine some of the legal issues Bitcoin presents and the

¹Jennifer Calvery, *Digital Currencies* (2013) C-Span <<http://www.c-span.org/video/?316289-1/digital-currencies-challenges-promises>>.

implications for regulation within Australia.² The first key legal issue that will be examined is the nature of the bank–customer relationship within a traditional banking transaction and how this relationship differs from a Bitcoin transaction when dealing with Bitcoin as a financial product and hence money, which is relevant for the purposes of regulation. This is a relevant consideration for regulation because of Bitcoin’s unique features and whether similar rules and legislative provisions of a bank-customer relationship will apply within an exchange-user relationship. The second key legal issue examines how Bitcoin transactions can be a vehicle for money laundering activities owing to it being decentralised and anonymous. In this regard, the KYC principle is discussed as a measure that could be used by banking institutions to counter money laundering activities involving Bitcoin. This is particularly important because Bitcoin transactions can be performed anonymously and without knowing the user on the other side. The third and final issue examines the extent to which taxation applies to Bitcoin transactions and whether it is categorised as money for tax purposes. This section concludes with a discussion on tax evasion and the consequences thereof for businesses and consumers using Bitcoin as a payment system.

In this thesis, it is argued that with the increasing use of virtual and digital currencies such as Bitcoin, the banking industry and relevant Australian Government authorities need to further investigate Bitcoin and consider the need for the development, to an extent, of an appropriate regulatory framework in order to address these legal issues. The regulation of Bitcoin in Australia may follow different approaches to the legal issues associated with Bitcoin transactions. The approaches to regulation of Bitcoin, in relation to these issues, will be dealt with in Chapter 4.

3.2 Legal Issues Formed within Bitcoin Transactions

Bitcoin transactions, as examined in Chapter 2, were developed with the aim of making payments anonymous and private within a decentralised domain. This has implications for the banking industry as banking institutions are dependent upon a bank–customer relationship. Therefore, this part will consider the bank–customer

²These issues will be discussed in Chapter 4 within other jurisdictions namely the United States of America, Canada and the European Union.

relationship of traditional transactions in comparison to Bitcoin transactions, which because of its decentralised nature and unique characteristics, presents as a payment system unlike traditional payment systems. This is a relevant consideration in this chapter in order to identify whether this relationship is subject to similar legislative principles within the financial sector. This will follow with an examination of Bitcoin as a ‘financial product’ and whether it is considered a regulated payment system in Australia. As discussed in Chapter 2, Bitcoin fulfil the functions of money; however, it is not recognised as legal tender and is an unregulated payment system under the Australian banking legislation. Therefore, Bitcoin is different to traditional payment systems in that it is not recognised by the Australian Government as legal tender, but it could fall within the auspices of a ‘financial product’, which is regulated within Australian banking laws.

3.2.1 The Bank–Customer Relationship

The importance of the bank–customer relationship centres on the fiduciary obligations a bank and customer have towards one another within a transaction.³ Therefore, a customer will generally approach a banking institution to deposit money and the bank will accept the money and keep it on credit within a bank account. However, the relationship between a bank and its customer may be challenged by fiduciary and contractual obligations within a transaction. This is especially the case with the advancement of technology in the banking industry and the increasing use of technology within transactions by consumers and businesses.⁴ The noteworthy challenge for the bank–customer relationship is the use of Bitcoin as a payment system and how banking institutions will manage the bank–customer relationship with Bitcoin users considering the anonymous and private use of Bitcoin within transactions. This is a significant risk to the bank–customer relationship because of the threat anonymous transactions may have on fraud and money laundering activities.⁵ Therefore, the bank–customer relationship within a Bitcoin transaction is a significant issue for banking institutions.

³John Glover, ‘Banks and Fiduciary Relationships’ (1995) 7 *Bond Law Review* 1, 1-4

⁴Rachel Johns and Bruce Perrott, ‘The Impact of Internet Banking on Business-Customer Relationships (Are you being Self-served?)’ (2008) 26 *International Journal of Bank Marketing* 465, 465.

⁵Arvid Hoffmann and Cornelia Birnbrich, ‘The Impact of Fraud Prevention on Bank-Customer Relationships’ (2012) 30 *International Journal of Bank Marketing* 390, 390-392.

Primarily, the bank–customer relationship is seen as a contractual relationship with fiduciary obligations, where the customer pays money to the credit of his or her account and this account will earn interest.⁶ Paget explains:⁷

The law of banking proper is the law of the relationship between a banker and his customer. Basically, the relationship is that of mandatory (the customer) and mandatory (the bank), but it is nevertheless a relationship which embraces mutual duties and obligations. It is a relationship peculiar to banking, giving rise to a contract between the two parties. The relationship is enjoyed by no one but a bank with reference to a customer and thus it is necessary to know what in law a customer is.

Therefore, the bank–customer relationship is a contractual one where both parties have reciprocal rights and duties. The contract between the bank and its customer is a general contract that also includes special contracts in-between.⁸ Furthermore, the contract deals with implied terms such as the bank collecting money or cheques from their customers and accounting for it; giving reasonable notice of closing accounts; informing the customer of any fraud detection; and maintaining the relationship as confidential.⁹ Professor Holden also states the following on implied terms in the contract:¹⁰

A remarkable feature of the creation of the contracts between banker and customer, is that the terms of the contract are not usually embodied in any written agreement executed by the parties. The contractual relationship which exists between banker and customer is a complex one founded originally upon the customs and usages of bankers. Many of those customs and usages have been recognised by the courts, and, to the extent that they have been so recognised, they must be regarded as implied

⁶*Foley v Hill* (1848) 9 ER 1002. See also Sheelagh McCracken (ed) et al, *Banking and Financial Institutions Law* (Thomson Reuters, 2013) 177.

⁷John Paget and Mark Hapgood, *Paget's Law of Banking* (LexisNexis, 12th ed, 2002) 110.

⁸Alan Tyree and Prudence Weaver, *Weerasooria's Banking Law and the Financial System in Australia* (LexisNexis, 6th ed, 2006) 215. See also Andrew Burrows, *English Private Law* (Oxford University Press, 2013) 806 for a further discussion on the nature of the bank-customer relationship.

⁹*Ibid.* See also *Burnett v Westminster Bank Ltd* [1966] 1 QB 742; [1965] 3 All ER 81. Cf *Amelia van der Merwe et al, Banking in the New Millennium* (Juta, 1999), 190; *Joachimson v Swiss Bank Corp* [1921] 3 KB 110.

¹⁰Consumer Focus, *Banking Services and the Consumer* (RLE: Banking & Finance) (Routledge, 2012) 89.

terms of the contract between banker and customer. It follows, therefore that this is a branch of the law where implied terms are of vital importance.

Therefore, the traditional bank–customer relationship is based on the terms in a contract between the parties and how the courts recognise this relationship through custom and usage. The financial contract between a banker and its customer guarantees ‘to make payments at specified times, in specified amounts and in specified circumstances ... promises to manage assets in the best interest of the beneficiaries’.¹¹ Furthermore, the legal relationship between a bank and its customer is not only contractual, but also based on that of a debtor and creditor. In this regard, a person will deposit or borrow money from the bank in order for there to be a debtor–creditor relationship, which points towards the parties having mutual obligations within this relationship.¹² Therefore, the debtor–creditor relationship adds to the obligations each party has towards each other in this relationship. This relationship was recognised in the *Foley v Hill*¹³ case where the House of Lords held that:¹⁴

Money when paid into a bank, ceases altogether to be the money of the customer ... It is then the banker’s money; he is known to deal with it as his own, he makes what profit of it he can, which profit he retains to himself ... He is guilty of no breach of trust in employing it; he is not answerable to the customer if he puts it into jeopardy ... The banker is not an agent or factor but he is a debtor.

The court in *Laing v Bank of New South Wales*¹⁵ affirmed the *Foley v Hill* decision and held that the legal relationship between a bank and its customer is one of debtor and creditor; this is also the position in Australia.¹⁶ In summary, the bank–customer

¹¹Parliament of Australia, ‘Financial System Inquiry Final Report’, 23 June 1997, 179
<http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/RP9697/97rp16>.

¹²Glover, above n 3, 50-51.

¹³(1848) 2 HL Cas 28; 9 ER 1002. In this case, the customer paid money into his own bank account with the understanding that his account would earn interest on this money. No interest accumulated over a period of six years and the customer took the bank to court in order to get his profits made.

¹⁴(1848) 9 ER 1002, 1005. Lord Brougham also stated that: ‘The trade of a banker is to receive money, and use it as if it were his own, he becoming a debtor to the person who has lent or deposited with him the money to use as his own’ – (1848) 9 ER 1002, 1008.

¹⁵[1954] AC 135.

¹⁶*Ibid.* The court in *Joachimson v Swiss Bank Corp* [1921] 3 KB 110,127 also confirmed the debtor-creditor relationship and Lord Atkin encapsulated the bank-customer relationship as follows: ‘It is said on the one hand that it is a simple contract of loan; it is admitted that there is added, or super-

relationship will exist only when there is an agreement between the two parties to open a bank account and the bank approves transactions according to the debtor–creditor relationship.

Unlike traditional banking transactions, Bitcoin transactions, as a peer-to-peer network, form a contractual relationship between users that is not controlled by a third-party banking institution. Therefore, a significant issue with Bitcoin transactions is the lack of a legal banking relationship between the user and a banking institution because no recognised fiduciary or contractual duties exist between parties. This is where Bitcoin transactions are left open to risk assessment and the regulation of consumer and financial protection under Australian law. Chapter 4 will provide a discussion on the avenues for regulation in relation to consumer and financial protection when Bitcoin transactions are utilised for everyday payment purposes.

As Bitcoin is governed by only a small number of governments,¹⁷ no contractual relationship exists between a user of Bitcoins and the designer of the Bitcoin system.¹⁸ Therefore, no regulated duties or obligations exist between the parties and there is no contractual relationship such as a debtor–creditor relationship. Furthermore, there is no service or user agreement on a Bitcoin platform unlike financial institutions, which provide clients with the necessary documentation regarding user and service agreements.¹⁹ This is an important difference because in order for a banking institution to conduct business with a customer, they need to know the customer and provide risk assessments of the customer’s financial status.

added, an obligation of the bank to honour the customer’s drafts to any amount not exceeding the credit balance at any material time; but it is contended that this added obligation does not affect the main contract. The bank has borrowed the money and is under the ordinary obligation of a borrower to repay. The lender can sue for his debt whenever he pleases. I am unable to accept this contention. I think that there is only one contract made between the bank and its customer. The terms of that contract involve obligations on both sides and require careful statement.’

¹⁷The countries governing the use of Bitcoin are narrowed down to the United States and Canada.

¹⁸Fergal Reid and Martin Harrigan, ‘An Analysis of Anonymity in the Bitcoin System’ (Paper presented at IEEE International Conference on Privacy, Security, Risk, and Trust, and IEEE International Conference on Social Computing, Ireland, 2011) 1318

<<http://www.cs.kent.edu/~javed/class-P2P13F/papers-2013/P03-bitcoinanonymity-Reid.pdf>>.

¹⁹Leandra Lederman, ‘Stranger than Fiction: Taxing Virtual Worlds’ (2007) 82 *New York University Law Review* 1620, 1628-1630.

In this regard, the banking industry developed the KYC principle, with the intention of Australian banks verifying and identifying its customers, and to monitor any suspicious transactions.²⁰ With Bitcoin transactions, the KYC principle is not applicable because transactions are anonymous and private ledgers restrict the monitoring of transactions by banking institutions and governments. This KYC principle will be explored in further detail later in this chapter when dealing with money laundering and Bitcoin transactions as a legal issue.

3.2.2 *Authorised Deposit-Taking Institutions and Bitcoin Transactions*

Owing to the decentralised character of Bitcoin, a discussion on Authorised Deposit-Taking Institutions ('ADI'), as a business of banking, is central to Bitcoin transactions and how these Bitcoin transactions differ from other like-transactions, for example, EFTs. This is relevant in order to understand whether any of the parties in a Bitcoin transaction engaging in the 'business of banking' are such that they are required to obtain authorisation as an ADI or gain an exemption from APRA. It is therefore key to discuss what a banking institution is under Australian law and the parties involved in such a traditional transaction. If Bitcoin fails to fall under the auspices of a banking institution definition, it is then relevant to consider how Bitcoin transactions could be regulated within the current banking regulations.

In Australia, banking institutions are known as 'Authorised Deposit Taking Institutions'. An ADI is defined as 'a body corporate which desires authority to carry on banking business in Australia may apply in writing to APRA²¹ for authority accordingly'.²² For the purposes of this thesis, an ADI will be limited to Australian banks and will not extend to other financial institutions. The words 'business of banking' has been a difficult concept to define in Australia, but in the case of *Commissioners of State Savings Bank of Victoria v Permewan Wright & Co Ltd*²³ it was held that an ADI carries on the 'business of banking' through the collection of money by receiving deposits from a customer as either an investment or savings. It is

²⁰Financial Action Task Force, *Recommendation 5: Customer Due Diligence and Record Keeping* (2008) <<http://www.un.org/en/sc/ctc/docs/bestpractices/fatf/40recs-moneylaundering/fatf-rec05.pdf>>.

²¹Australian Prudential Regulating Authority.

²²*Banking Act 1959* (Cth) s 9(3). Therefore, it can be any Australian bank, credit union and foreign subsidiary banks.

²³(1914) 19 CLR 457.

also known as lending money to potential customers on the premise that the loan will be repaid with interest as required by the bank. The court in *United Dominions Trust Ltd v Kirkwood*²⁴ identified a third element that is also accepted by the High Court of Australia:

There are, therefore two characteristics usually found in bankers today: (i) they accept money from, and collect cheques for, their customers and place them to their credit; (ii) they honour cheques or orders drawn on them by their customers when presented for payment and debit their customers accordingly. These two characteristics carry with them also a third, namely (iii) they keep current accounts, or something of that nature, in their books in which the credits and debits are entered.²⁵

In addition to the characteristics outlined by the High Court of Australia, s 5 of the *Banking Act 1959* (Cth) also adopts this definition of ‘business of banking’,²⁶ which is defined as:²⁷

- (a) a business that consists of banking within the meaning of paragraph 51(xiii) of the Constitution; or
- (b) a business that is carried on by a corporation to which paragraph 51(xx) of the Constitution applies and that consists, to any extent, of:
 - (i) both taking money on deposit (otherwise than as part-payment for identified goods or services) and making advances of money; or (ii) other financial activities prescribed by the regulations for the purposes of this definition.

Therefore, applying international provisions, an ADI may also be interpreted as an institution that accepts deposits and uses these deposits to make loans.²⁸ This has been reiterated in the case of *Melbourne Corporation v Commonwealth*²⁹ where it was held that lending money, accepting deposits and honouring cheques are seen as ‘business of banking’ and therefore consider the plaintiff institution as an ADI.³⁰

²⁴[1966] 2 QB 431.

²⁵Ibid 446-447.

²⁶See *Foley v Hill* (1848) 9 ER 1002, 1005.

²⁷*Banking Act 1959* (Cth).

²⁸See also *Uniform Commercial Code (UCC)* (2006) s 4-105, which defines a bank as ‘a person [or institution] engaged in the business of banking, including a savings bank, savings and loan association, credit union, or trust company.’

²⁹(1947) 74 CLR 31.

³⁰Ibid [24].

Furthermore, EFTs legally fall within the meaning of ‘business of banking’ and according to Beatty, Aubrey and Bollen, it ‘there are a number of uncertainties around the application of the concept of banking business to electronic payment systems’ and that the application of this is unclear.³¹ Therefore, within an EFT transaction a deposit is being made online and there is movement of money from the customer to the bank in an online system.³²

Against the definition of an ADI and the ‘business of banking’ within an EFT transaction under the *Banking Act*, a Bitcoin system, on the other hand, also accepts deposits from one party to another and is a system that may be used for investment purposes. Within the Bitcoin system, a user can transfer coins from one user to another where the transfer, or so-called deposit, is accepted by the other user through checking the chain of signatures.³³ However, a Bitcoin system and digital currency transaction do not provide loans to Bitcoin users as with traditional banking services and there is also no third party such as APRA or the RBA that authorises, identifies and verifies these transactions. Therefore, the Bitcoin system cannot be defined as an ADI under the current banking legislation and regulations.

Nevertheless, Bitcoin seems to operate in a similar way as an EFT transaction³⁴ owing to their electronic payment characteristics. Therefore, Bitcoin will be able to function the same way as an EFT transaction under the Australian banking law if regulation is needed. The following section will examine the structure of an EFT transaction and how EFTs are similar and distinct from Bitcoin transactions. This is useful for the regulation of Bitcoin in Chapter 4, which considers regulation in more detail.

In order to understand the different parties and processes involved between an EFT transaction and Bitcoin transaction, it is useful to demonstrate this by means of an

³¹Andrea Beatty, Mark Aubrey and Rhys Bollen, ‘E-Payments and Australian Regulation’ (1998) 21 *University of New South Wales Law Journal* 489, 509.

³²Ibid 509-510.

³³Arthur Gervais, Ghassan Karame, Srdjan Capkun and Vedran Capkun, ‘Is Bitcoin a Decentralized Currency?’ (2013) *IACR Cryptology ePrint*, 2 <<https://eprint.iacr.org/2013/829.pdf>>.

³⁴The *Anti-Money Laundering and Counter-Terrorism Act* 2006 defines an EFT as ‘an electronic instruction sent between an “ordering institution” and a “beneficiary institution”.’

example. Throughout this part of the chapter, a Bitcoin transaction will be compared to an EFT transaction because of their similar characteristics.³⁵

The use of an EFT can be demonstrated as follows: Sarah owes Ben \$50 and instead of paying Ben with cash or a cheque, she decided to electronically transfer the money into Ben’s account. Sarah would, according to law, instruct ABC Bank to credit the \$50 to XYZ Bank (Ben’s bank). This is also known as a ‘payment order’. Take note that there are two different banks concerned in this scenario. ABC Bank will request XYZ Bank to credit Ben’s account with the requested amount. In regard to the instruction made by Sarah to her bank, Sarah will be known as the ‘sender’ of the \$50 and ABC Bank as the ‘receiving bank’. As soon as ABC Bank executes the order, Ben becomes the ‘beneficiary’ of the \$50 and XYZ Bank is known as the ‘beneficiary bank’. This transaction will usually incur a small transaction fee as well. The transaction between a customer and a bank is illustrated in Figure 1.³⁶

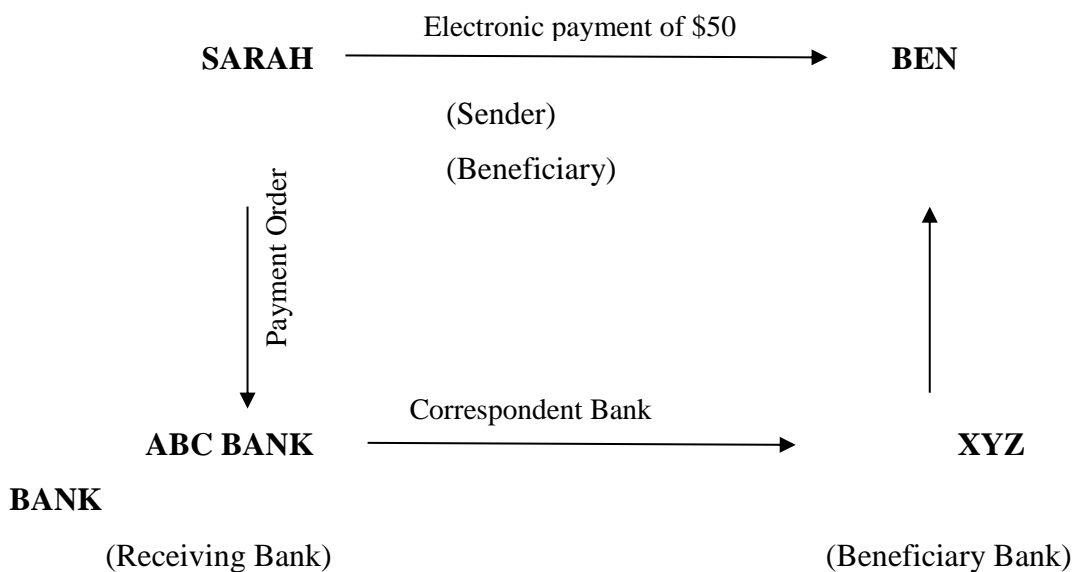


Figure 1 The parties involved in an EFT transaction

Figure 1 clearly indicates the relationship between the bank and its customer in the EFT transaction and the control the bank has over the transaction. However, unlike the example provided regarding the process of an EFT transaction, the process and

³⁵Refer to Chapter 2 in regard to electronic money and electronic fund transfers.

³⁶The *UNCITRAL Model Law on International Credit Transfers* (1992) UN General Assembly, Resolution 47/34 has given some direction on how an EFT transaction is processed.

parties in a Bitcoin transaction differs. Taking the same two people mentioned in the example of EFT transactions, the process of Bitcoin transactions is illustrated in Figure 2.

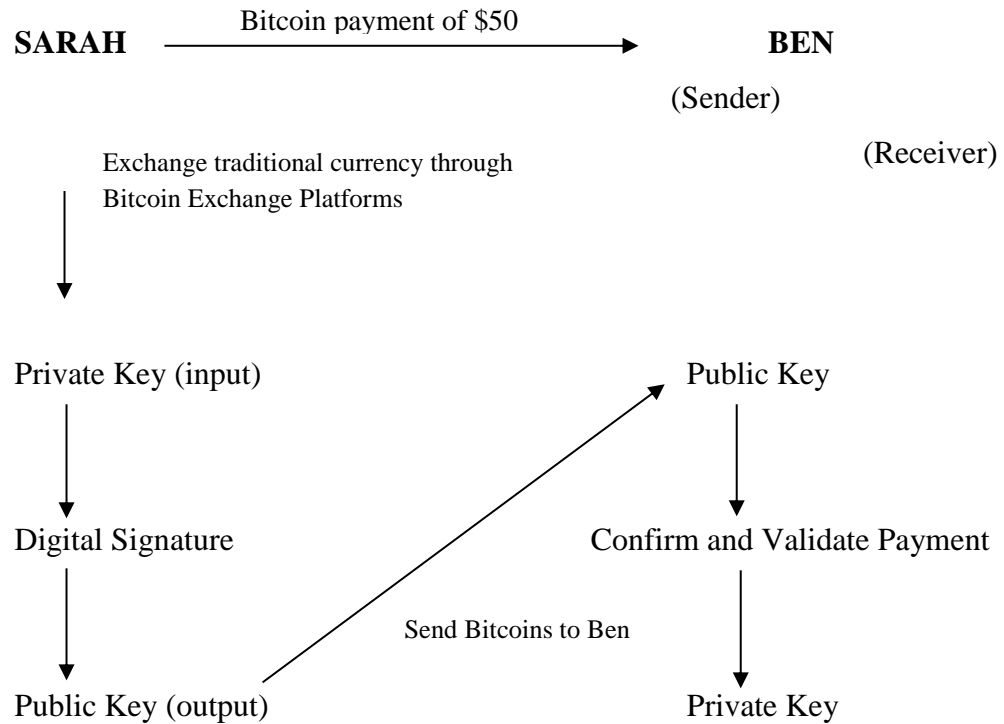


Figure 2 The parties involved in a Bitcoin transaction

Sources: Figures adapted from John Heggsteun, *Why Bitcoin Has Real Potential to Upend the Legacy Payments System* (19 July 2014) Business Insider Australia <<http://www.businessinsider.com.au/bitcoin-potential-upend-legacy-payments-system-2014-7?r=US&IR=T>>; CryptoCompare, *How Does Bitcoin Cryptography Work?* (23 July 2016) <<https://www.cryptocompare.com/wallets/guides/how-does-bitcoin-cryptography-work/>>.

The transaction between Sarah and Ben involves a three-stage process:

- (i) an input – where a copy of the address is kept when Bitcoins are sent from Sarah;
- (ii) an amount – where a copy of the number of Bitcoins sent to Ben are kept; and
- (iii) an output – where there is a copy kept of Ben’s Bitcoin address.³⁷

Sarah will make use of an online exchange platform to buy Bitcoins. These Bitcoins will then appear in her wallet on her computer. Sarah will also receive a private key

³⁷*How Do Bitcoin Transactions Work?* (20 March 2015) Coindesk <<http://www.coindesk.com/information/how-do-bitcoin-transactions-work/>>.

in order to send the Bitcoins to Ben. Once Sarah has sent the Bitcoins to Ben, a cryptography process will verify the transaction.³⁸

The difference between the two examples is that there is no correspondent banking between two banks in a Bitcoin transaction. Therefore, no clearing or identifying process is present in a Bitcoin transaction. There are also no transaction fees applicable in a Bitcoin transaction. The parties and process involving Bitcoin and EFT transactions are different. As discussed in Chapter 2, one disadvantage in using a Bitcoin transaction is the irreversibility of the transaction once it is paid into a wrong wallet account. It may be possible to monitor Bitcoin transactions through the *ePayments Code* as applicable to EFTs. This will improve consumer welfare and awareness in future.³⁹

Prior to the *ePayments Code*, the *EFT Code of Conduct* provided guidance on how to deal with electronic forms of payment. The Campbell Committee of Inquiry into the Australian Financial System recognised in 1981 the role electronic banking will play in future and that it will have significant policy considerations for the banking industry.⁴⁰ However, in 1983, the Martin Group Review of the Australian Financial System recognised that legislation was not necessary and they introduced a Payments System Council to deal with a variety of EFT issues.⁴¹ However, because of some limitation to the *EFT Code of Conduct*, it was subject for review by ASIC, which resulted in the development of the *ePayments Code*.⁴² The new *ePayments Code* ensured for greater consumer protection when dealing with online banking and new technological developments. However, the *ePayments Code* is not developed in a way to regulate virtual and digital transactions like Bitcoin.

³⁸Ibid. See the process explained in Chapter 2 of this thesis.

³⁹Yonatan Sompolinsky and Aviv Zohar, *Accelerating Bitcoin's Transaction Processing Fast Money Grows on Trees, Not Chains* (2013) <<https://eprint.iacr.org/2013/881.pdf>>. See also Conrad Barski and Chris Wilmer, *Bitcoin for the Befuddled* (No Starch Press, 2014) 56.

⁴⁰Australian Commonwealth Government, *Australian Financial System* (September 1981) Final Report 402 <<http://fsi.gov.au/files/2014/01/Chpt1-12.pdf>>.

⁴¹Australian Commonwealth Government, *Review of the Australian Financial System* (December 1983) Final Report <<http://fsi.treasury.gov.au/content/DiscussionPaper.asp>>.

⁴²Financial Ombudsman Service, *E-Payments Code* (2012) Issue 9 <<https://www.fos.org.au/the-circular-9-home/epayments-code/>>.

The *ePayments Code* regulates the way EFTs are managed as well as the parties involved in this type of transaction. This needed to be considered because the parties and the payment process in a Bitcoin transaction are different to those in an EFT transaction.⁴³

When considering EFTs as a payment method, they are regulated under the *ePayments Code* when dealt with by an ADI.⁴⁴ Most ADIs are registered under the previous *EFT Code of Conduct* and ASIC strongly recommends that all ADI's subscribe under the *ePayments Code*, although the *ePayments Code* is only voluntary.⁴⁵ Therefore, the *ePayments Code* plays an important role in the regulation of EFTs through ADIs in order to protect the rights and interests of customers. The *ePayments Code* is an example of self-regulation within the banking industry and an in-depth discussion is provided in Chapter 4 in regard to its application to the regulation of virtual and digital currencies such as Bitcoin.

This comparison above demonstrates that the parties and payments within Bitcoin transactions differ from the traditional bank–customer transaction and relationship. Firstly, most other payment systems have a third party confirming the transaction, whereas Bitcoin transactions do not have any centralised organisation dealing with the clearance and verification of payments.⁴⁶ Therefore, Bitcoin does not include the obligation of verifying a process or identity of the parties in a transaction. Secondly, any items can be bought in a Bitcoin transaction, even if it is illegal, and will not be excluded by the transaction or a third party to the transaction.⁴⁷ Thirdly, Bitcoin transactions are irreversible, meaning that when the person makes an incorrect payment, the transaction cannot be reversed in the same way as with credit card

⁴³See, eg, Georgios Papadopoulos, 'Electronic Money and the Possibility of a Cashless Society' (Working Paper No 18, Erasmus University Rotterdam, 2007) ch 4 <https://www.academia.edu/630789/Electronic_Money_and_the_Possibility_of_a_Cashless_Society>; Peter Ellinger (ed) et al, *Ellinger's Modern Banking Law* (Oxford, 5th Ed, 2011) 115.

⁴⁴11-205MR. It was always known as the *Electronic Funds Transfer Code of Conduct* which was in operation since 1986. The *ePayments Code* has been in operation since March 2013.

⁴⁵Australian Securities and Investment Commission, *ePayments Code* (March 2015) <<http://www.asic.gov.au/regulatory-resources/financial-services/epayments-code/#download>>.

⁴⁶Rainer Böhme, Nicolas Christin, Benjamin Edelman and Tyler Moore, 'Bitcoin' (2014) *Journal of Economic Perspectives* 1, 4.

⁴⁷Ibid 5.

transactions.⁴⁸ Taking these characteristics into account, it is noteworthy that the *ePayments Code*, as mentioned above, may extend to Bitcoin transactions because of its electronic nature through exchange platforms.

Even though, as mentioned, Bitcoin transactions and EFTs have similar characteristics, Bitcoin transactions differ from EFTs in that Bitcoin is not regulated under a government structure. However, as explained in Chapter 2, Bitcoin does fulfil all the functions of money, being that it is a medium of exchange, a store of value and a unit of account, but it lacks the characteristic of being classified as legal tender. As a result, there exist no contractual duties (rights and obligations) between parties in a Bitcoin transaction whereas with an EFT transaction parties have contractual duties towards each other and towards the financial institution.⁴⁹ In this regard, it is argued that it would be beneficial if Bitcoin transactions are also monitored by a code similar to the *ePayments Code*, which is voluntary, as customer and consumer protection would then be dealt with on a more consistent level in regards to Bitcoin transactions.⁵⁰

The unregulated nature of Bitcoin transactions and lack of contractual obligations suggest that protection for consumers and businesses using Bitcoin as a payment system can create further legal issues. As mentioned, Bitcoin transactions are not seen as legal tender, therefore not legal currency. It is suggested that Bitcoin transactions are rather seen as a commodity in regard to the transaction of goods and services. In light of this, there are still existing bartering contracts (commodity) and therefore parties in a Bitcoin transaction (which is also a barter transaction) still have contractual obligations towards each other that will be similar to the bank–customer relationship. This seems to approach a positive step towards controlling Bitcoin transaction activities to some extent in order to protect customers.

⁴⁸Jeffrey Simser, ‘Bitcoin and Modern Alchemy: In Code We Trust’ (2015) 22(2) *Journal of Financial Crime* 156.

⁴⁹Sheelagh McCracken (ed) et al, *Banking and Financial Institutions Law* (Thomson Reuters, 2013) 179-180.

⁵⁰See also Rhys Bollen, ‘The Legal Status of Online Currencies: Are Bitcoins the Future?’ (2013) *Journal of Banking and Finance Law and Practice* 1, 38.

3.2.3 Money as a 'Financial Product' within Traditional and Bitcoin Transactions

Against the background discussion in Chapter 2 on how Bitcoin transactions function and what parties are involved in digital transactions as discussed above, attention is now given to a more comprehensive analysis of money as a 'financial product' within traditional regulated transactions compared against Bitcoin transactions and the concomitant legal issues.

As explained in Chapter 2, Bitcoin transactions are characterised by a peer-to-peer network that is decentralised, private, and anonymous (due to the use of pseudonyms), and which has no or minimal transaction fees. In contrast, banking institutions, specifically Australian banks, which are regulated through government legislation and regulation,⁵¹ are centralised and operate in the public domain with a clearly regulated bank–customer relationship. There is also a stipulated transaction fee for every transaction made either over the counter or online.⁵² Owing to these differing characteristics it is perhaps unsurprising that Australian banks will not accept Bitcoin given potential risks associated with Bitcoin transactions.⁵³ The Chief Executive Officer of the Australian Banker's Association, Mr Tony Pearson, for instance stated that: 'Digital currencies are not subject to regulation or oversight. The lack of transparency and regulatory oversight raises a number of risks for users and also poses risks for the payments system, the integrity of the financial system and the erosion of the tax base'.⁵⁴

Some of the general risks Bitcoin transactions pose, because of a lack of regulation, are highlighted by Williams and include the following:⁵⁵

⁵¹Regulated through the Reserve Bank of Australia (RBA) and Australian Securities and Investment Commission (ASIC).

⁵²See also David Lee Kuo Chuen, *Handbook of Digital Currency: Bitcoin, Innovation, Financial Instruments, and Big Data* (Academic Press, 2015) 569.

⁵³The European Banking Authority (EBA) has announced that banks should avoid any dealing with Bitcoin until it is regulated. It also identified at least 70 risks associated with Bitcoin.

⁵⁴Mandie Sami, 'Bitcoin Traders accuse Australia's biggest Banks of Declaring War on Cryptocurrencies', 22 September 2015, *ABC News* (online) <<http://www.abc.net.au/news/2015-09-22/bitcoin-traders-claim-discrimination-by-australias-banks/6795782>>.

⁵⁵Diana Ngo, *Top 10 Risks Associated with Bitcoin Presented by Finance Professor at World Bank Forum* (10 November 2014) *The Coin Telegraph* <<http://cointelegraph.com/news/112896/top-10-risks-associated-with-bitcoin-presented-by-finance-professor-at-world-bank-forum>>.

- (i) As Bitcoin is not considered legal tender, banks are required to implement more secure systems for their customers, which is not cost-effective.
- (ii) Bitcoin is only limited in nature because of the number of Bitcoins in circulation. This indicates that it will decrease in value over time and have limited capacity as a currency. This is a risk to the banking industry as they deal with legal tender and legal currency, which generally adds value to assets held by customers.
- (iii) Because of Bitcoin's characteristics, it does not operate like legal tender and therefore taxation considerations will be different. This is a risk to banks as traditional transactions need to fulfil the legal requirements set by the ATO in regard to tax.
- (iv) The risk of using Bitcoin as a payment system can be harmful to customers as various consumer protection issues may arise. This is the case where a Bitcoin transaction is made to an incorrect user and the money cannot be reimbursed to that user as the payments are anonymous. This is unlike traditional payments where chargebacks can be made as a result of the wrongful payment.
- (v) Bitcoin poses a risk for money laundering activities because of its unique features, which make it difficult to incorporate the KYC principle as with traditional transactions. In this case, banks see Bitcoin as a risk because of the lack of customer interaction that is necessary to comply with risk-based programs against money laundering.

Williams further states that: 'to counteract the panoply of risks associated with virtual and digital currencies such as Bitcoin, there needs to be greater regulation, international oversights, sovereign control and stronger consumer protection rules put firmly in place'.⁵⁶ This illustrates the need for regulatory reform to some extent in Australia in order to protect businesses and consumers dealing with Bitcoin as a payment system.

⁵⁶Ibid.

If Bitcoin were to be accepted as a legal currency (meaning it being accepted as legal tender) and gain wide enough recognition, banking institutions, especially Australian banks, could face the following further potential issues:⁵⁷

- (i) Reduced control over payment processes because of its decentralised nature and governments not having control over the clearance of payments.⁵⁸
- (ii) A decrease in profit if virtual or digital currencies replace traditional forms of money.⁵⁹
- (iii) Bitcoin transactions will open banking institutions up to money laundering activities as the current laws on Bitcoin is not adequate to deal with money laundering activities of such nature.
- (iv) The use of Bitcoin as a payment system is volatile because of the fluctuation in value.⁶⁰

The above mentioned potential risks can be detrimental to the Australian banking industry because, as mentioned, Australian banks operate differently to Bitcoin platform. Therefore, one of the most critical issues facing businesses that use Bitcoin is the challenge of opening a bank account and finding a bank that will accommodate Bitcoin customers.⁶¹

Notwithstanding the above-mentioned risks to the banking industry, Australian banks have been considering the potential use of Blockchain, as discussed in Chapter 2, in order to facilitate and manage potential Bitcoin transactions. As explained,

⁵⁷Reserve Bank of Australia, *Bitcoin* (2013) <<http://www.rba.gov.au/foi/disclosure-log/pdf/131419.pdf>>. See also Lloyd's, 'Bitcoin: Risk Factors for Insurance' (2015) *Emerging Risk Report – 2015*, 6 <<https://www.lloyds.com/~media/files/news%20and%20insight/risk%20insight/2015/bitcoin%20%20final.pdf>>.

⁵⁸This provides the user of Bitcoin full access and control of the payment system with no central organisation monitoring the transactions.

⁵⁹There will be no exchange currency which means that profits will fall.

⁶⁰See for example the incident with Mt. Gox exchange platform discussed in Chapter 2.

⁶¹Adroit Lawyers, *Bitcoins & Banks: Risk v Return* (2015) <<http://www.adroitlawyers.com.au/bitcoin-banks-risk-v-return/>>. See also Penny Crosman, *Why Banks Are Testing Bitcoin's Blockchain (Without Bitcoin)* (1 June 2015) *American Banker* <<http://www.americanbanker.com/news/bank-technology/why-banks-are-testing-bitcoins-blockchain-without-bitcoin-1074622-1.html>>.

Blockchain is not dependent on Bitcoin and functions on its own as a public ledger. According to Petrasic and Bornfreund:⁶²

Interest in the technology exploded when it became clear that blockchain can be used to document the transfer of any digital asset, record the ownership of physical and intellectual property, and establish rights through smart contracts, among other applications.

This is further evidenced through banking institutions and the international banking industry seeing Blockchain as a system to ‘improve and enhance currency exchange, supply chain management, trade execution and settlement, remittance, peer-to-peer transfers, micropayments, asset registration, correspondent banking and regulatory reporting (including applications related to “know your customer” and anti-money-laundering rules)’.⁶³ Financial institutions such as Barclays, Fidelity, Citi, Nasdaq and Goldman Sachs have all started exploring the potential of Blockchain and how it can assist with smart contracts and regulated algorithms within the banking industry.⁶⁴ This suggests that banking institutions are open to the idea of building their own online applications using Blockchain in order to help customers with commercial contracts in a digital format when dealing with bank-related activities such as investments and mortgages.⁶⁵

Furthermore, the Commonwealth Bank of Australia has been experimenting with Blockchain, especially payments, and how this can be utilised for a faster and cheaper experience of banking.⁶⁶ According to KPMG, ‘potential Blockchain investors need to look beyond the hype and ensure that any technology solution is underpinned by exceptional engineering, a full understanding of the barriers and

⁶²Kevin Petrasic and Matthew Bornfreund, *Beyond Bitcoin: The Blockchain Revolution in Financial Services* (7 March 2016) White & Case <<http://www.whitecase.com/publications/insight/beyond-bitcoin-blockchain-revolution-financial-services>>.

⁶³Ibid.

⁶⁴Ibid.

⁶⁵James Evers, ‘Blockchain ‘Smart Contracts’ to Disrupt Lawyers’, *Australian Financial Review* (online), 30 May 2016 <<http://www.afr.com/technology/blockchain-smart-contracts-to-disrupt-lawyers-20160529-gp6f5e>>.

⁶⁶Andrew Colley, ‘Why are Australia’s Banks so Interested in Blockchain?’, *Sydney Morning Herald* (online), 23 May 2016 <<http://www.itnews.com.au/feature/why-are-australias-banks-so-interested-in-blockchain-419397>>.

clear economics on the cost and benefits associated with the technology'.⁶⁷ Therefore, the use of Blockchain by banks to improve the above mentioned areas, provide banks with a tool to facilitate, control, track and store Bitcoin transactions when dealing with customers who utilise Bitcoin transactions. However, this is only limited to the public domain and the challenge is to monitor and control Bitcoin payments within the private domain, which is anonymous and private. As a result, the unregulated nature of Bitcoin and absence of the traditional bank–customer relationship makes it difficult to monitor Bitcoin transactions and recognise it as a ‘financial product’ and hence legal tender.

With the discussion on Bitcoin and EFT transactions above as well as the use of Blockchain by Australian banks, the question is whether Bitcoin can be introduced as a new payment concept within the banking industry. For Bitcoin to be seen as a form of payment, in its absence of it being recognised as legal tender, it is key for Bitcoin to correspond with the definition of a financial product. Section 763A of the *Corporations Act*⁶⁸ defines a ‘financial product’ as:

A facility through which, or through the acquisition of which, a person does one or more of the following: (a) makes a financial investment (see section 763B); (b) manages financial risk (see section 763C); and (c) makes non-cash payments (see section 763D).⁶⁹

Furthermore, a ‘facility’ is defined as ‘(a) intangible property; or (b) an arrangement or a term of an arrangement (including a term that is implied by law or that is required by law to be included); or (c) a combination of intangible property and an

⁶⁷Andrew Dickinson, Giles Williams, Jim Suglia and Ton Reijns, *Financial Services Investing in Blockchain, but Barriers Remain* (27 April 2016) KPMG <<https://home.kpmg.com/au/en/home/insights/2016/04/financial-services-investing-in-blockchain-fs.html>>.

⁶⁸*Corporations Act 2001* (Cth).

⁶⁹ASIC noted the following on digital currencies being a ‘financial product’: ‘A digital currency, in and of itself, is not a financial product. Providing advice about a digital currency is not financial product advice, buying and selling digital currency means you are not making a market in a financial product. But some ancillary services you might provide that are associated with digital currencies could be regulated by ASIC’ - Australian Securities and Investments Commission, Submission 44 to the Senate Economics References Committee, *Inquiry into Digital Currency*, April 2015, 43 <http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Su bmissions>.

arrangement or term of an arrangement'.⁷⁰ When considering Bitcoin within the confines of this definition, it is open to interpretation whether Bitcoin is considered money or not under specific legislation. The use of Bitcoin as a payment system for value or for investment purposes should be a valid consideration when determining its validity under the Act.

When considering the definition of 'facility' above, 'intangible property' is open for interpretation and the court may possibly find that Bitcoin is considered a 'facility'. However, the facility must be 'issued' to the other person and this is where the courts may find it difficult to consider Bitcoin as a financial product. Legally, Bitcoin is not issued by a governing body and it is up to the Australian Government to introduce amendments as to whether 'miners' or 'exchange platforms' may be subject to the definition of 'issuer'.

Under these sections, digital currencies such as Bitcoin are not categorised as a financial product and therefore consumers will not fall under the legal definition of the *Corporations Act* in this regard. This is because Bitcoin is not necessarily seen as a 'facility' and a person cannot manage a financial risk through this type of system because of its different and unique characteristics.⁷¹ ASIC made recommendations that Bitcoin is not considered a financial product.⁷² However, ASIC has noted that when regulated financial service providers accept digital currencies such as Bitcoin as a means of payment, Bitcoin may, in future, be considered as a financial product if it is regulated within the meaning provided by the *Corporations Act*.⁷³

However, with ASIC recommending that Bitcoin is not considered a financial product, there exists uncertainty within the banking industry regarding the use of Bitcoin and the risks involved with these transactions. Specifically, the Bitcoin Foundation and the Bitcoin Association of Australia⁷⁴ are both concerned with the

⁷⁰*Corporations Act 2001* (Cth) s 762C.

⁷¹Ibid. See also Jon Southurst, *Australian Regulator: Bitcoin is Not a Financial Product* (16 December 2014) CoinDesk <<http://www.coindesk.com/australian-regulator-bitcoin-financial-product/>>.

⁷²ASIC Submission, above n 69, 12.

⁷³Ibid.

⁷⁴Both these Foundations are non-for-profit organisations which helps the Bitcoin community.

fact that financial institutions do not want to be seen associating with Bitcoin and notes:

The issue of access to banking services is also key to the growth of a local digital currency industry ... classification of all Bitcoin businesses and users as “high risk” customers are both inappropriate and disproportionate. Banking institutions should have a risk-based approach that is tailored to the nature, size and complexity of their business and proportionate to the level of money laundering and terrorism financing risk.⁷⁵

Many banks do not accept customers wanting to open a bank account in order to transfer and exchange Bitcoins to traditional money because of the risks involved and Bitcoin’s unregulated status in Australia.⁷⁶ However, as mentioned above, the banking industry is open to explore Blockchain that is an open ledger and traceable. The legal issues that are explored in this chapter, particularly money laundering, is one of the reasons why banks are cautious of Bitcoin as a payment method because of its characteristics drawing towards criminal activities such as money laundering. The characteristics such as anonymity, decentralisation as well as irreversibility make Bitcoin transactions complicated for banks to deal with.

Given the nature of Bitcoin transactions and the challenges it presents to banking institutions, this thesis argues that not only civil matters can arise such as whether Bitcoin transactions and traditional transactions consist of similar banking traits, which makes it difficult for the RBA to accept Bitcoin payment systems, but also criminal matters, in particular money laundering and tax evasion. Money laundering usually involves the taking of information such as credit card information and personal information of customers as well as the development of software to steal money from banking systems. As a decentralised and anonymous system, Bitcoin creates opportunities for money laundering activities to bypass financial institutions and their regulation of payments. Therefore, the following section will deal with

⁷⁵Parliament of Australia, The Senate, Economics References Committee Report, *Digital Currency – Game Changer or Bit Player* (August 2015), 20
<http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Report>.

⁷⁶See Danton Bryans, ‘Bitcoin and Money Laundering: Mining for an Effective Solution’ (2014) 89 *Indiana Law Journal* 441.

money laundering in general and examine money laundering activities specifically within virtual and digital currency transactions. The key point of this section will be the KYC principle and how this principle plays an important role in monitoring not only general and traditional banking transactions, but also Bitcoin transactions through exchange platforms.

3.3 Money Laundering

The battle against money laundering is an ongoing international issue and with the creation of virtual and digital currencies criminals have undoubtedly taken advantage of using Bitcoin as a vehicle for money laundering purposes because of its unique characteristics. This part of the chapter will discuss money laundering and how Bitcoin transactions create legal challenges as an unregulated digital currency. Because of the various legal risks involved in Bitcoin transactions, it further creates legal challenges for the banking industry and also as to how banks need to manage and control the use of Bitcoin as a form of payment. It is therefore submitted that Bitcoin, as an unregulated payment system, poses considerable risks to businesses and consumers in relation to money laundering and the reporting of transactions by banking institutions.⁷⁷

3.3.1 Defining Money Laundering

According to Nagel, money laundering can be categorised as ‘financial transaction with property that represents the proceeds of some form of unlawful activity’.⁷⁸ Similarly, Cox explains money laundering as ‘the use of a cash business such as a launderette to facilitate the mingling of legal and illegal funds’ and ‘the generic process of disguising the original proceeds of the funds, a process more normally referred to as layering’.⁷⁹ Furthermore, money laundering is also known as ‘the use of traditional business practices to move funds and the people who engage in this activity are doing so to make money’.⁸⁰ Therefore, a person engaged in money

⁷⁷The regulatory framework of Bitcoin in relation to money laundering will be examined in Chapter 4.

⁷⁸Pancho Nagel, ‘Money Laundering’ (2015) 52 *American Criminal Law Review* 1357, 1357.

⁷⁹Dennis Cox, *Handbook of Anti-Money Laundering* (John Wiley & Sons, 2014) 6.

⁸⁰Jonathan Turner, *Money Laundering Prevention: Deterring, Detecting and Resolving Financial Fraud* (John Wiley & Sons, 2011) 3.

laundering ‘conceals the existence, illegal source, or illegal application of income, and then disguises that income to make it appear legitimate’.⁸¹

Accordingly, money laundering can be achieved through three different ways:

- (i) ‘Placement’ – dirty money is being brought into a financial system.
- (ii) ‘Layering’ – the dirty money is going through a process that allows the money to separate itself from the illegality thereof.
- (iii) ‘Integration’ – the money that has been cleaned will enter the financial system as legal funds.⁸²

The aim of these methods is to make it difficult to distinguish between legitimate and illegitimate funds entering the economy and to not attract attention.⁸³

As a result, the introduction of Bitcoin in 2009 has created new avenues for criminal activities and money laundering to occur. Jensen for instance notes that ‘money laundering enables those involved or seeking to involve themselves in criminal activity with an avenue to finance their criminal objectives’.⁸⁴ The fact that the use of Bitcoin ensures that no transaction may be traced and is kept anonymous has in turn created a platform for criminals to use as a way to organise crime on an anonymous level. Pearce explains that illicit activities, in particular money laundering, are being explored by criminals on a more serious level because virtual and digital currencies are anonymous, and it is the characteristics of Bitcoin that interest money launderers as well as terrorist financing.⁸⁵

In order to prevent and monitor money laundering activities, the Australian Transaction Reports and Analysis Centre (‘AUSTRAC’) together with the Australian Crime Commission (‘ACC’), which is now known as the Australian Criminal

⁸¹Ibid. See also Beatrix Pinter, ‘Money Laundering, Suspicious Circumstances’ (2013) *Law Series Annals of West University of Timisoara* 11, 12.

⁸²Bryans, above n 76, 442.

⁸³Cox, above n 79, 18.

⁸⁴Neil Jensen, ‘Creating an Environment in Australia Hostile to Money Laundering and Terrorism Financing: A Changing Role for AUSTRAC’ (2008) 5 *Macquarie Journal of Business Law* 93, 94.

⁸⁵Ibid. See also Australian Transaction Reports and Analysis Centre, *Terrorism Finance Report* (2014) <<http://www.austrac.gov.au/sites/default/files/documents/terrorism-finance-in-australia-2014.pdf>>.

Intelligence Commission (ACIC) since 1 July 2016, collect information and data relating to money laundering activities in Australia.⁸⁶ Therefore, these agencies help businesses monitor suspicious transactions through educating these entities of their obligation regarding transaction reporting.⁸⁷ Specifically, in 2011 AUSTRAC noted that ‘the dynamic nature and rapid technology developments offered by new electronic payment methods such as digital currencies enabled their exploitation by criminals for money laundering purposes’.⁸⁸ This indicates that money laundering is one of the central challenges for governments and banking institutions when dealing with possible regulation and whether it should be treated as legal tender.

However, AUSTRAC further states that ‘by far the bulk of attempted money laundering activity continues to be undertaken through the mainstream financial system ... At this stage, digital currencies are not widely accepted as payment for goods and services, limiting the opportunities for criminals to use digital currency to convert, move and launder illicit funds, as well as the amount of illicit funds that can be laundered’.⁸⁹ AUSTRAC also notes that ‘while the nature and extent of money laundering through digital currencies and virtual worlds are unknown, it is important to recognise their potential for criminal exploitation, particularly in response to tighter regulation of established or traditional financial channels’.⁹⁰ Therefore, the development of virtual currency is making it possible for cyber criminals to steal money and launder it without being detected.

AUSTRAC together with the Australian Federal Police have identified some areas where virtual and digital currencies such as Bitcoin are being used that involves criminal money laundering related activities: stealing Bitcoins via hacking of wallets; exchanging Bitcoins online (exchange platform) from black marketplaces

⁸⁶Australian Crime Commission, *Organised Crime in Australia* (May 2015) 12, <<https://www.acic.gov.au/sites/g/files/net1491/f/2016/06/oca2015.pdf?v=1467241691>>.

⁸⁷Australian Transaction Reports and Analysis Centre, *AUSTRAC Agency Multicultural Plan 2013-2015* (2016) <http://www.austrac.gov.au/sites/default/files/documents/agency_multicultural_plan_1315.pdf>.

⁸⁸Australian Transaction Reports and Analysis Centre, *Money Laundering in Australia* <http://www.austrac.gov.au/files/money_laundering_in_australia_2011.pdf>.

⁸⁹Rohan Pearce, *Is Virtual World Money Laundering a Real Threat?* (24 August 2012), <<https://slummagazine.wordpress.com/2012/08/24/is-virtual-world-money-laundering-a-real-threat/>>.

⁹⁰*Ibid.* See also Australian Transaction Reports and Analysis Centre, *Statement: Bitcoin and Bank Closures* (September 2015) <<http://www.austrac.gov.au/media/media-releases/statement-bitcoin-and-bank-closures>>.

such as Silk Road to import illegal narcotics into Australia; national supply of illicit narcotics where the payment is in Bitcoin; and using the process of money laundering through the exchange of Bitcoin.⁹¹ These different criminal activities all include criminals using the Bitcoin network to process payments and illicit activities without being detected.

In relation to cyber criminals using the Bitcoin network as a way to launder money or narcotics, Chang explains that ‘our trust in cyberspace has been taken from us by hackers, cybercriminals and sophisticated cyber attackers who intend to do us harm ... Attacks on both the public sector and the private sector are rampant. Denial of service, identity theft, and cyber extortion are now all too common’.⁹² Bollen likewise indicates that it is vital for society in ‘creating and protecting trust which becomes a crucial issue in the regulation of payment services. It is generally accepted that adequate regulation is a key precursor to consumer acceptance of new payment methods, including mobile banking and payments’.⁹³ This indicates that the potential for Bitcoin transactions to increase money laundering activities, which includes theft and mistrust of systems, should be focused on in relation to possible regulation of the use of Bitcoin in transactions.

3.3.2 *Process of Money Laundering*

In order to understand how money laundering is undertaken through virtual and digital currencies, the following section will refer to the process of money laundering and how it applies to virtual and digital currencies. Money laundering, as previously mentioned, can be defined as ‘the process criminals use to conceal their illicit profits and to avoid authorities prosecuting and convicting them and confiscating the

⁹¹Parliament of Australia, above n 75, 23.

⁹²Cybersecurity Research and Development, *Challenges and Solutions*, Hearing before the Subcommittee on Research & Committee on Science, Space & Technology, House of Representatives, 113th Congress, (26 February 2013) 37
< file:///J:/Documents/HDR%20Research/nps67-060513-04%20(1).pdf>.

⁹³Rhys Bollen, ‘The Legal Status of Online Currencies: Are Bitcoins the Future?’ (2013) 1 *Journal of Banking and Finance Law and Practice* 38.

proceeds of crime'.⁹⁴ Therefore, money laundering can have some significant ramifications within a society and can affect the community in the following ways:⁹⁵

- (i) 'crowding out' businesses who deal with transactions legally as money laundering businesses sell products and services below these retail markets;
- (ii) influencing the reputation of financial institutions when transactions are illegal;
- (iii) supporting the financing of terrorism; and
- (iv) expanding on other criminal activities.

It is thus argued that without the necessary regulation of virtual and digital currencies, the use of Bitcoin in money laundering activities will create risks for governments, business and consumers.⁹⁶

The existing *Anti-Money Laundering and Counter-Terrorism Financing Act 2006* (Cth) ('*AML/CTF Act*') regulates anti-money laundering laws through examining ways of money laundering and preventing money from reaching the 'integration' stage. Unfortunately, as Bitcoin transactions are not monitored, it creates problems for governments and enforcement agencies. This is because there is no trace of money being illicitly used or any illegal activities authorities can physically remove.⁹⁷

⁹⁴Australian Crime Commission (ACC), *Money Laundering* (2013)

<<https://www.crimecommission.gov.au/publications/intelligence-products/crime-profile-fact-sheets/money-laundering>>.

⁹⁵Ibid. See also Australian Transaction Reports and Analysis Centre (AUSTRAC), *Money laundering in Australia* (2011) <http://www.austrac.gov.au/files/money_laundering_in_australia_2011.pdf>.

⁹⁶Ole Bjerg, 'How is Bitcoin Money?' (2016) 33 *Theory, Culture & Society* 53, 69. Cf Jeff Lewis, 'Legal Tender, Precious Metals and Alternative Currency' (2016)

<<https://www.scribd.com/document/209720641/Legal-Tender-Precious-Metals-and-Alternative-Currency>>.

⁹⁷Ibid 443.

3.3.3 Bitcoin and Money Laundering Activities

The illicit use of Bitcoin for money laundering purposes will be dealt with under the *AML/CTF Act*.⁹⁸ This Act requires that businesses, in particular financial institutions, undertake and comply with the following reporting duties:

- (i) enrolling and/or registering the business with AUSTRAC;⁹⁹
- (ii) customer identification and verification of identity;¹⁰⁰
- (iii) record keeping;¹⁰¹
- (iv) establishing and maintaining an Anti-Money Laundering and Counter-Terrorism ('AML/CTF') program;¹⁰² and
- (v) ongoing customer due diligence and reporting.¹⁰³

Businesses and banking institutions must fulfil the above-mentioned reporting duties according to the *AML/CTF Act* in order to minimise the risk of money laundering of their products and services.¹⁰⁴ However, the development of Bitcoin poses significant challenges to businesses with incorporating money laundering programs when using Bitcoin as a method of payment. This suggests that businesses need to incorporate stringent record keeping, customer identification and customer due diligence programs (also known as KYC programs). On the other hand, the *AML/CTF Act* applies to 'money' and the illegal activities using money within traditional banking transactions, but because of Bitcoin's characteristics it is questionable whether Bitcoin will be applied within this Act. In Chapter 2, it was determined that Bitcoin fulfils the functions of money but lacks legal tender status.

⁹⁸*AML/CTF Act* s 3 - The purpose of this Act is:

- (a) to fulfil Australia's international obligations, including:
 - (i) Australia's international obligations to combat money laundering; and
 - (ii) Australia's international obligations to combat financing of terrorism; and
- (b) to address matters of international concern, including:
 - (i) the need to combat money laundering; and
 - (ii) the need to combat financing of terrorism; and
- (c) by addressing those matters of international concern, to affect beneficially Australia's relations with:
 - (i) foreign countries; and
 - (ii) international organisations.

⁹⁹*Anti-Money Laundering and Counter-Terrorism Financing Act 2006* (Cth) s 6.

¹⁰⁰*Ibid* Div 5 s 35.

¹⁰¹*Ibid* Pt 10 Div 1-7.

¹⁰²*Ibid* Pt 7 Div 1-4.

¹⁰³*Ibid* Div 6 s 36.

¹⁰⁴*Ibid* s 83.

Therefore, the question is whether Bitcoin can be characterised as ‘money’ under the *AML/CTF Act* in order for businesses to implement AML/CTF programs as instructed within the Act.

According to the *AML/CTF Act*, ‘physical currency’ is defined as ‘coin and printed money (whether of Australia or of a foreign country) that: (a) is designated as legal tender; and (b) circulates as, and is customarily used and accepted as, a medium of exchange in the country of issue’.¹⁰⁵ Furthermore, the *AML/CTF Act* defines ‘e-currency’ as ‘an internet-based, electronic means of exchange that is:

(a) known as any of the following:

- (i) e-currency;
- (ii) e-money;
- (iii) digital currency;
- (iv) a name specified in the *AML/CTF Rules*; and

(b) backed either directly or indirectly by:

- (i) precious metal; or
- (ii) bullion; or
- (iii) a thing of a kind prescribed by the *AML/CTF Rules*; and

(c) not issued by or under the authority of a government body; and includes anything that, under the regulations, is taken to be e-currency for the purposes of this Act’.¹⁰⁶

In relation to s 5 of the *AML/CTF Act* mentioned above, Bitcoin is a ‘digital currency’ and therefore falls within the ambit of the *AML/CTF Act*, but because of the words ‘backed either directly or indirectly by: (i) precious metal; or (ii) bullion; or (iii) a thing of a kind prescribed by the *AML/CTF Rules*’, Bitcoin cannot be seen as ‘supported’ by the definition and potentially falls outside of money laundering regulation.¹⁰⁷ This is partly because AUSTRAC and FATF forces are not able to physically remove Bitcoins. On the other hand, law enforcement agencies, within the

¹⁰⁵*AML/CTF Act* s 5.

¹⁰⁶*Ibid.*

¹⁰⁷See Douglas Allan, ‘Statutory Review of the *Anti-Money Laundering and Counter-Terrorism Financing Act* (Cth) 2006’ (February 2014) Charles Sturt University, 4-5 <<https://www.ag.gov.au/Consultations/Documents/StatutoryReviewAnti-MoneyLaunderingAndCounter-TerrorismFinancingActCth200/australian-graduate-school-of-policing-and-security-28february2014.pdf>>.

normal ambit of the Act, are able to trace money laundering activities and remove coins, banknotes and EFTs when detected.

The discussion on the following cases serves to illustrate the difficulties of monitoring and responding to money laundering activities involving Bitcoin. To date there have been very few cases concerning the use of Bitcoins for money laundering purposes. Hence, two key decisions will be examined that originate from the US; however, the judgments given by the courts are suitable in considering how Australia may focus on the possible implementation of money laundering laws.

The first case to be examined in regards to the use Bitcoin in a money laundering process is the case of *United States v Liberty Reserve* ('*Liberty Reserve*').¹⁰⁸ Liberty Reserve was established in 2006 and was an online exchange platform based in Costa Rica where nearly US\$6 billion was laundered through the website by making use of digital currencies such as Bitcoin.¹⁰⁹ Calvery further explains that 'Liberty Reserve operated as an online ... money transfer system ... deliberately designed to avoid regulatory scrutiny and tailored its services to illicit actors looking to launder their ill-gotten gains ... [A] \$6 billion money laundering operation'.¹¹⁰ This website made it possible for users to send and receive virtual currency anonymously and was also categorised as banking for criminals.¹¹¹ Funds were also held in numerous locations, mainly Australia, China, Cyprus, Hong Kong, Russia, Spain and the US.¹¹² In May 2013, the creators of Liberty Reserve were arrested on a count of money laundering.¹¹³ The indictment on how Liberty Reserve operated read as follows:

¹⁰⁸*United States v Liberty Reserve* 13 Crim. 368 (S.D.N.Y. May 20, 2013).

¹⁰⁹Seth Robbins, *Liberty Reserve Case Exposes New Frontiers in Laundering Digital Cash* (4 June 2013) Insight Crime <<http://www.insightcrime.org/news-analysis/liberty-reserve-case-exposes-new-frontiers-in-laundering-digital-cash>>.

¹¹⁰Jennifer Calvery, *Beyond Silk Road: Potential Risks, Threats, and Promises of Virtual Currencies*, Testimony before the Senate Committee on Homeland Security and Government Affairs, (2013) 113th Congress 11 < <https://www.hsgac.senate.gov/hearings/beyond-silk-road-potential-risks-threats-and-promises-of-virtual-currencies>>.

¹¹¹Ibid. See also Peter Mitchell, Tom Hays and Raphael Satter, 'Westpac Caught up in World's Biggest Money Laundering Sting', *Sydney Morning Herald* (online), 28 May 2013 <<http://www.smh.com.au/it-pro/security-it/westpac-caught-up-in-worlds-biggest-money-laundering-sting-20130528-2naa8.html#ixzz3mwR81JYi>>.

¹¹²*United States v Liberty Reserve*, [16].

¹¹³Lawrence Trautman, 'Virtual Currencies; Bitcoin & What now after Liberty Reserve, Silk Road and Mt. Gox?' (2014) xx *Richmond Journal of Law and Technology* 1, 89.

Liberty Reserve's system was designed so that criminals could affect financial transactions under multiple layers of anonymity and thereby avoid apprehension by law enforcement. Not surprisingly, Liberty Reserve was in fact used extensively for illegal purposes, functioning in effect as the bank of choice for the criminal underworld.¹¹⁴

When a user registers on Liberty Reserve, it only requires the user to enter the necessary information such as names, email address and date of birth but the website does not specifically ask users to verify this information.¹¹⁵ An email address can also be anonymous. It is argued that many people who were using Liberty Reserve outside of the US viewed it as very cheap and more efficient than PayPal.¹¹⁶ Liberty Reserve only charged 1% per transaction as well as a 'private fee'.¹¹⁷

There is no due diligence in accordance with the verification of users' transactions because of the anonymous nature of Liberty Reserve.¹¹⁸ Interestingly, Liberty Reserve had a money laundering policy, which was accessible on the website and which stated that:¹¹⁹

It is illegal to transport, transmit or transfer, or attempt to transport, transmit or transfer a monetary instrument or funds in excess of \$10 000 ... either into or outside of Costa Rica and/or any other countries with similar legislation if the purpose is to carry out an illegal activity, or to avoid reporting requirements.

This suggests that Liberty Reserve was aware of money laundering activities within such a business structure, but seemed to ignore it.¹²⁰ Under s 1960 of the *Money Laundering Control Act*¹²¹ it is a crime to operate an unlicensed money transmitting business. Liberty Reserve withdrew their application to the Financial Crimes

¹¹⁴ASIC, above n 69, 19-21.

¹¹⁵Financial Crimes Enforcement Network, *Notice of Finding that Liberty Reserve S.A. is a Financial Institution of Primary Money Laundering concern* (May 2013) Department of the Treasury <https://www.FinCEN.gov/statutes_regs/files/311--LR-NoticeofFinding-Final.pdf>.

¹¹⁶Brian Krebs, *Indictment, Arrest of Virtual Currency Founder Targets Alleged 'Financial Hub of the Cybercrime World'* (13 May 2013) <<http://krebsonsecurity.com/2013/05/u-s-government-seizes-libertyreserve-com/>>.

¹¹⁷*Ibid.*

¹¹⁸FinCEN, above n 115, 6.

¹¹⁹*Ibid.* 7.

¹²⁰Robbins, above n 109.

¹²¹*Money Laundering Control Act* 1986, Pub. L. No. 99-579, 100 Stat. 3207-18 to -21.

Enforcement Network ('FinCEN') to register as a money transmitting business and operated underground.¹²² Therefore, Liberty Reserve operated as an unlicensed money transmitting business in violation of sections 1960 and 5330 of the Act.¹²³

The website was 'effectively put out of business'¹²⁴ and one of the co-founders pleaded guilty to a charge of money laundering in May 2013.¹²⁵ After the sentence was handed down, Attorney-General Caldwell noted that:¹²⁶

The significant sentence handed down today shows that money laundering through the use of virtual currencies is still money laundering, and that online crime is still crime. Together with our American and international law enforcement partners, we will protect the public even when criminals use modern technology to break the law.

This case centred on the implications of money laundering and how new technology creates an opportunity to break the law; however, this case did not deal with whether Bitcoin is considered 'money' and only came to the conclusion that Liberty Reserve was not a money transmitting business registered under FinCEN. Therefore, the regulations proposed by FinCEN in regard to money transmitting businesses were not adhered to by Liberty Reserve. The question regarding whether Bitcoin is money for money laundering purposes was left open by the court.

Another recent example of illicit activities fuelled by the use of Bitcoin and which illustrates the difficulty of detecting the physical presence of a Bitcoin transaction is the case of *United States v Ross William Ulbricht* ('*Silk Road*').¹²⁷ Silk Road was launched in 2011 and operated as a middle-man for illicit activities. Silk Road was seen as an equivalent to eBay as it provided the necessary platform to buy and sell

¹²²*United States v Liberty Reserve*, [34].

¹²³18 U.S.C. §§ 1960, 1956(a)(1) (2006).

¹²⁴Department of Justice, Acting Assistant Attorney General Mythili Raman Testifies before the Senate Committee on Homeland Security and Governmental Affairs (2013) <<http://www.justice.gov/criminal/pr/speeches/2013/crm-speech-131118.html>>.

¹²⁵Russell Brandon, *Liberty Reserve co-founder Pleads Guilty in \$6 billion Money-laundering Case*, (31 October 2013) The Verge <<http://www.theverge.com/2013/10/31/5052428/liberty-reserve-co-founder-pleads-guilty-in-6-billion-money>>.

¹²⁶United States Attorney's Office, Liberty Reserve Founder Arthur Budovsky Sentenced In Manhattan Federal Court To 20 Years For Laundering Hundreds Of Millions Of Dollars Through His Global Digital Currency Business (May 2016) Department of Justice <<https://www.justice.gov/usao-sdny/pr/liberty-reserve-founder-arthur-budovsky-sentenced-manhattan-federal-court-20-years>>.

¹²⁷*United States v Ross William Ulbricht*, 21 U.S.C §846 (2014).

goods and services.¹²⁸ However, Silk Road is distinct from eBay in the way it provided anonymity for buyers and sellers when doing transactions.¹²⁹ On this platform, buyers and sellers exchanged goods and services and paid with Bitcoins. Silk Road became famous because of the privacy Bitcoin transactions created and therefore illicit activities and money laundering could take place.¹³⁰ Silk Road uses a network called 'TOR', which ensures that all users on the Silk Road site are anonymous. In this case, the only payments that were accepted were Bitcoins.¹³¹ A buyer purchased Bitcoins on an exchange platform and then created an account on Silk Road to purchase illegal goods and launder money. Silk Road also had a delivery service that delivered the illegal goods to a residence within a specified period.¹³²

In 2013, the creator of Silk Road, Ross Ulbricht, was arrested. The indictment read as follows:

Ulbricht sought to anonymize transactions on Silk Road in two principal ways. First, Ulbricht operated Silk Road on what is known as 'The Onion Router,' or 'Tor' network, a special network of computers on the Internet, distributed around the world, designed to conceal the true IP addresses of the computers on the network and thereby the identities of the networks' users. Second, Ulbricht designed Silk Road to include a Bitcoin-based payment system that served to facilitate the illegal commerce conducted on the site, including by concealing the identities and locations of the users transmitting and receiving funds through the site.¹³³

Two of the counts with which Ross Ulbricht was charged were narcotics trafficking and money laundering conspiracy.¹³⁴ In June 2015, Ross Ulbricht was sentenced to

¹²⁸ASIC, above n 69, 91.

¹²⁹Ibid.

¹³⁰Ibid.

¹³¹It is an untraceable P2P network.

¹³²Senators Joe Manchin and Charles E. Schumer to U.S. Attorney General and Michele Leonhart, Administrator, *Drug Enforcement Administration* <<http://manchin.senate.gov/public/index.cfm/pressreleases?ID=284ae54a-acfl-4258-belc-7aceelf7e8b3>>.

¹³³United States Attorney's Office for the Southern District of New York, *Manhattan U.S. Attorney Announces The Indictment of Ross Ulbricht, The Creator and Owner of The "Silk Road" Website* (2014) <<http://www.justice.gov/usao/nys/pressreleases/February14/RossUlbrichtIndictmentPR.php>>.

¹³⁴Leagle, *United States v Ulbricht* (2014) <<http://www.leagle.com/decision/In%20FDCO%2020141014K69/U.S.%20v.%20ULBRICHT>>.

life in prison after being found guilty of the charges set out.¹³⁵ Silk Road not only made available the trade of illicit goods but also the means to launder money on an anonymous basis. As mentioned, platforms such as Silk Road operate on a very anonymous level and the question is how did the US Government receive knowledge of these illicit activities and laundering of money? The US Government searched for a server based in Iceland and from there they intercepted the illegal transactions.¹³⁶ Silk Road has been closed temporarily, but it cannot be said with certainty that all illegal activities and money laundering activities have been put to a stop.

In contrast to *Liberty Reserve*, the defendants in *Silk Road* argued that because Bitcoin is not categorised as legal tender, the use of Bitcoin cannot amount to money laundering.¹³⁷ However, the court stated that ‘Bitcoins carry value – that is their purpose and function – and act as a medium of exchange’.¹³⁸ The court went further by noting the case of *United States v Day*¹³⁹ where the defendants argued that gold, just like Bitcoin, is not qualified as ‘funds’ or ‘monetary instruments’ under the *Money Laundering Control Act*.¹⁴⁰ In *United States v Day* the court concluded that ‘gold can constitute “funds” ... where it is moved as a liquid, monetary asset’ and ‘any other reading would lead to anomalous results at odds with the “purpose and structure” of the money laundering statute’.¹⁴¹ This indicates that Bitcoin can be seen as ‘money’ in some form. As noted in Chapter 2, Bitcoin fulfils the functions of money, especially it being a medium of exchange, but it is not accepted as legal tender.

The *Liberty Reserve* and *Silk Road* cases are both examples that illustrate the anonymity and privacy under which a person can commit money laundering and the challenges authorities such as AUSTRAC and FATF face in detecting illicit activities such as money laundering on the internet. Despite temporarily closing the Silk Road website, there are still other websites operating illegally through the use of

¹³⁵Ibid.

¹³⁶Ibid.

¹³⁷*United States v Ulbricht*, [40].

¹³⁸Ibid.

¹³⁹700 F.3d 713 (4th Cir. 2012).

¹⁴⁰*Money Laundering Control Act* 1986, Pub. L. No. 99-579, 100 Stat. 3207-18 to -21.

¹⁴¹*United States v Day*, 723-726.

Bitcoin.¹⁴² In order to combat money laundering activities on these kinds of websites, the Australian Government and other governments must create a regulatory framework that will ensure authorities take action against the creators of these websites as well as the anonymous users on these websites.¹⁴³ Furthermore, on a regulatory level, the AML/CTF legislation only creates minimal control and management with regard to digital currencies and therefore it is difficult to detect most of the illegal transactions being done as it cannot be physically intercepted by legal authorities.¹⁴⁴

Grinberg remarks that ‘although the Bitcoin economy is flourishing, users are anxious about Bitcoin’s legal status and the possibility of a government crackdown. Some point to Bitcoin’s ability, like all digital and anonymous currencies, to facilitate money laundering, tax evasion, and trade in illegal drugs’.¹⁴⁵ On the other hand, Christopher argues that ‘law enforcement should look to digital currency exchangers not as criminals, but instead as partners in the effort to eradicate money laundering and – more importantly – the crimes underlying the laundering’.¹⁴⁶ This explains that the Bitcoin network creates a way for criminals to operate illegally; however, with the appropriate regulation in the use of Bitcoin, money laundering through virtual and digital exchange platforms can be controlled and regulated on a level that provides protection to businesses and consumers using Bitcoin as a payment system.

Following the *Silk Road* and *Liberty Reserve* cases, FinCEN issued a guideline on money laundering to businesses and consumers stating that Bitcoin is not ‘money’ and that ‘virtual currency operates like a currency in some environments, but does not have all the attributes of real currency, and in particular does not have legal

¹⁴²Larry McIntyre, ‘Cyber-Takings: The War on Crime Moves into the Cloud’ (2014) 14 *Pittsburgh Journal of Technology, Law and Policy* 333, 344.

¹⁴³Jerry Brito and Andrea Castillo, *Bitcoin: A Primer for Policy Makers* (Mercatus Centre, 2013) 25.

¹⁴⁴AML/CTF Act s 5.

¹⁴⁵Reuben Grinberg, ‘Bitcoin: An Innovative Alternative Digital Currency’ (2012) 4 *Hastings Science and Technology Law Journal* 159, 161. See also Peter Tucker, ‘The Digital Currency Doppelganger: Regulatory Challenge or Harbinger of the New Economy’ (2009) 17 *Cardozo Journal of International and Comparative Law* 589, 602.

¹⁴⁶Catherine Christopher, ‘Whack-a-Mole: Why Prosecuting Digital Currency Exchanges Won’t Stop Online Laundering’ (2013) 1 *Lewis and Clark Law Review* 1.

tender status in any jurisdiction'.¹⁴⁷ This guideline further deals with how money laundering activities will be dealt with in appropriate legislation. A discussion on the interpretation and regulation of money laundering activities within Bitcoin transactions will be further discussed in Chapter 4 focusing on Australia and selected foreign jurisdictions.

3.3.4 Operation of Money Laundering Activities and Bitcoin Transactions

When dealing with Bitcoin transactions where it is converted to ordinary or traditional money, the transactions will generally be covered under the AML/CTF legislation as a result of it overlapping with banking services.¹⁴⁸ Virtual and digital currencies are not widely used and accepted by consumers or businesses unlike traditional banking services such as EFTs and therefore it cannot be seen as a 'closed loop economy'.¹⁴⁹ The standard transactions being regulated and reported to by AUSTRAC are:¹⁵⁰

- (i) International Fund Transfers between Australia and foreign accounts where the purchase involves digital currencies.
- (ii) Threshold Transaction Reports where the amount of cash deposits or withdrawals are AUD\$10 000 or more concerning bank accounts of exchange providers dealing in digital currency.
- (iii) Suspicious Matter Reports involving suspicious digital currency exchange.

¹⁴⁷US Department of the Treasury, Financial Crimes Enforcement Network, *Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies* (March 2013) Guidance FIN-2013-G001, (March 2013) <http://FinCEN.gov/statutes_regs/guidance/html/FIN2013-G001.html>.

¹⁴⁸Calvery explains that 'the innovations we are seeing within the financial services industry are a benefit to commerce on many levels. From providing services to the unbanked, to the development of new financial products, the virtual economy holds great promise ... [the] challenge to our great innovators [will be to] extend your focus to devising creative solutions for preventing the abuse of virtual currencies by criminals, such as those who would exploit children' - Jennifer Calvery, *Beyond Silk Road: Potential Risks, Threats, and Promises of Virtual Currencies*, Testimony before the Senate Committee on Homeland Security and Government Affairs, (2013) 113th Congress 4 <<https://www.hsgac.senate.gov/hearings/beyond-silk-road-potential-risks-threats-and-promises-of-virtual-currencies>>.

¹⁴⁹Ibid 13. See also Derek Dion, 'Note, I'll Gladly Trade You Two Bits on Tuesday for a Byte Today: Bitcoin, Regulating Fraud in the E-economy of Hacker-Cash' (2013) 13 *University of Illinois Journal of Law, Technology & Policy* 247.

¹⁵⁰AUSTRAC, above n 95, 13.

The reporting of these transactions by AUSTRAC together with s 5 of the AML/CTF legislation indicates that there is still minimal regulation in Australia for digital currencies such as Bitcoin with regard to money laundering. Nevertheless, Australia commenced a statutory review of the AML/CTF legislation in December 2013¹⁵¹ and it was stated that ‘the use and ongoing expansion of digital currencies is an area of continuing policy interest to the Attorney-General’s Department. A number of options to address the money laundering and terrorism financing issues created by the emergence of digital currency systems are being considered in the context of the statutory review of the AML/CTF Act’.¹⁵² In October 2014, the Standing Senate Economic References Committee also inquired into the use of digital currencies in Australia.¹⁵³ The change of legislation as well as the Australian Parliament’s steps taken towards reporting on transactions that involve Bitcoin shows the positive move by the government towards regulating digital currencies on a more serious level.

In addition to Australia regulating Bitcoin under its AML/CTF legislation in regard to money laundering, the FATF remarked that ‘financial inclusion and AML/CFT should be seen as serving complementary objectives’ against the fight of money laundering.¹⁵⁴ The FATF further observed that:¹⁵⁵

It recognises that applying an overly cautious response to AML/CFT safeguards can have the unintended consequence of excluding legitimate businesses and consumers from the financial system, thereby compelling them to use services that are not subject to regulatory and supervisory oversight. They argue the AML/CFT controls must not inhibit access to formal financial services for financially excluded and unbanked

¹⁵¹*AML/CTF Act* s 251. See also Attorney-General's Department, Statutory Review of the Anti-Money Laundering and Counter-Terrorism Financing Act 2006 (2015) <<http://www.ag.gov.au/consultations/pages/StatReviewAntiMoneyLaunderingCounterTerrorismFinActCth2006.aspx>>.

¹⁵²Parliament of Australia, above n 75, 17.

¹⁵³Ibid 1. See also Julie Walters, Russell Smith, Brent Davis, Kim-Kwang Raymond Choo and Hannah Chadwick, ‘The Anti-Money Laundering and Counter-Terrorism Financing Regime in Australia: Perceptions of Regulated Businesses in Australia’ (2012) *Australian Institute of Criminology Report* 117.

¹⁵⁴Justice and International Mission Unit Synod of Victoria and Tasmania, Uniting Church in Australia, Submission 30 to the Senate Economics References Committee, *Inquiry into Digital Currency*, September 2013, 3

<http://www.apf.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Submissions>.

¹⁵⁵Ibid 3.

persons. The FATF recognises that financial exclusion could undermine the effectiveness of an AML/CFT regime.

Therefore, it is not only necessary to change regulation but also the *AML/CFT Act* and ‘the [statutory] review is the logical place to be looking at that and looking at what needs to be done’ according to AUSTRAC.¹⁵⁶ The positive response by AUSTRAC and the submission made by the Australian Government on the regulation of Bitcoin in regard to money laundering will be further examined in Chapter 4.¹⁵⁷

In April 2015, AUSTRAC summarised how businesses will have to deal with Bitcoin transactions under the AML/CFT regime if it were to be included in the Act.¹⁵⁸ The first requirement would be for businesses to have an AML/CFT program, which requires businesses to assess the risk of money laundering for their customers.¹⁵⁹ The second requirement states that businesses involved in Bitcoin transactions need to have a KYC policy in place in order to keep track of due diligence with customers and whether they are at risk.¹⁶⁰ Lastly, businesses are required to have the necessary monitoring systems in place in order to report a suspicious digital transaction over a certain amount, for example, AU\$10 000 digital cash.¹⁶¹ Because of the vast expansion of virtual and digital currencies such as Bitcoin, it is necessary to ‘regulate this in a way that prevents having to come back and regulate again in a relatively short amount of time for a new product that comes out’.¹⁶²

¹⁵⁶Parliament of Australia, above n 75, 57.

¹⁵⁷See discussion of approaches in Chapter 4.

¹⁵⁸Parliament of Australia, above n 75, 56-57.

¹⁵⁹*Ibid.*

¹⁶⁰*Ibid.* See also Tara Mandjee, ‘Bitcoin, It’s Legal Classification and Its Regulatory Framework’ (2014) 15 *Journal of Business and Securities Law* 1, 29.

¹⁶¹*Ibid.*

¹⁶²Attorney General’s Department, Submission 41 to the Senate Economics References Committee, *Inquiry into Digital Currency*, March 2015, 9

<<http://www.aph.gov.au/DocumentStore.ashx?id=4c7577b0-ef54-4d0b-b657-61f4d454a2b1&subId=302132>>.

Furthermore, ‘In Australia the vast majority of Digital Currency businesses and users are law-abiding and desire the enhanced legitimacy of appropriate legal oversight and recognition. Incorporating Digital Currency into law enforcement legislation, particularly through the *Anti-Money Laundering and Counter-Terrorism Financing Act 2006*, is a necessary step toward guaranteeing the security and legitimacy of Digital Currencies in Australia’ - Australian Digital Currency Commerce Association, Submission 15 to the Senate Economics References Committee, *Inquiry into Digital Currency*, November 2014, 14

If the intention of the Australian Government is to include the regulation of digital currencies under this legislation, it is submitted that it is necessary to include the KYC principle in relation to Bitcoin transactions within this framework. Banking institutions deal with transactions on a day-to-day basis and apply compliance and reporting of money laundering duties through transactions. Therefore, because of the great amount of transactions banking institutions deal with, it was necessary to develop the KYC principle in order to monitor suspicious transactions. The following section will deal with the KYC principle and how it applies to banking institutions as well as Bitcoin transactions when monitoring financial transactions.

3.3.4.1 The ‘Know-Your-Customer’ Principle (Due Diligence)

The KYC principle is seen as central to the prevention of money laundering and illicit activities.¹⁶³ Therefore, the background to the KYC principle needs to be understood as a ‘due diligence’ principle within the financial sector. When dealing with the KYC principle, the following words by the poet Robert Frost explains the road that both the financial institution and the customer should take:¹⁶⁴

Two roads diverged in a yellow wood, and sorry I could not travel both and be one traveller, long I stood and looked down one as far as I could to where it bent in the undergrowth. Then took the other, as just as fair, and having perhaps the better claim, because it was grassy and wanted wear. I shall be telling this with a sigh somewhere ages and ages hence: Two roads diverged in a wood, and I – I took the one less travelled by, and that has made all the difference.

The question is whether a KYC policy (the diverged road) should be implemented in order to prevent Bitcoin being used for illicit activities (‘wanted wear’) and in the future with possible regulation (‘with a sigh’) see whether it has made all the

<<http://www.apf.gov.au/DocumentStore.ashx?id=f7dbba27-a951-4200-9fa9-d18ea2f3aaa8&subId=301998>>.

¹⁶³Australian Transaction Reports and Analysis Centre, *Regulatory Obligations: Know Your Customer Policy* (2008) 1 <<http://www.austrac.gov.au/businesses/obligations-and-compliance/austrac-compliance-guide>>.

¹⁶⁴Robert Frost, ‘The Road Not Taken’ (1874) *The Poetry Foundation* <<http://www.poetryfoundation.org/poem/173536>>.

difference. Against this background, it is useful to explain the history of the KYC policy (also referred to as ‘due diligence’), how it developed, and the process taken within a financial institution, because it is an important term within the financial sector. This will then be compared to whether KYC policies will be suitable for Bitcoin transactions.

The principle of due diligence can be found within the US *Securities Act*,¹⁶⁵ which regulated any sales of securities after the economic depression in the 1930s.¹⁶⁶ Furthermore, this Act required that these securities should meet certain due diligence requirements, which meant that proper communication and documentation must have been met under this Act for the security to be accepted.¹⁶⁷ Due diligence is defined by Spedding as:

Mainly a legal and financial course of action, first designed to avoid litigation and risk, second to determine the value, price and risk of a transaction, and third to conform various facts, data and representation.¹⁶⁸

On the other hand, and on a more international level, the Basel Committee states that:¹⁶⁹

KYC safeguards go beyond simple account opening and record-keeping and require banks to formulate a customer acceptance policy and a tiered customer identification programme that involves more extensive due diligence for higher risk accounts, and includes proactive account monitoring for suspicious activities.

The first definition is limited in the functions of due diligence, but it has been developed to include monitoring of suspicious transactions. Therefore, due diligence ensures the appropriate identification of a customer and monitoring of suspicious

¹⁶⁵*Securities Act 1933* (Cth) s 11(b)(3).

¹⁶⁶Ross Cranston, *Principles of Banking Law* (Oxford, 1997) 212. See also Jan Arno Hessbruegge, ‘The Historical Development of the Doctrines of Attribution and Due Diligence in International Law’ (2004) 36 *New York University Journal of International Law & Politics* 265.

¹⁶⁷*Securities Act 1933* (Cth) s 6, 11. The investigation entails that of ‘a prudent man in the management of his own property’ – see s 12 of the Act.

¹⁶⁸Linda Spedding, *Due Diligence and Corporate Governance* (LexisNexis, 2004) 2.

¹⁶⁹Basel Committee on Banking Supervision, *Customer Due Diligence for Banks* (2001) <<http://www.fsa.go.jp/inter/bis/f-20011004-2c.pdf>>.

transactions.¹⁷⁰ According to AUSTRAC, customer due diligence ‘is central to an effective anti-money laundering and counter-terrorism financing (AML/CTF) regime. Reporting entities need to identify and verify each of their customers’.¹⁷¹ Therefore, it can be seen as the foundation to detecting money laundering. The following statement by the EU summarises due diligence as:¹⁷²

Conducting on-going monitoring of the business relationship including scrutiny of transactions undertaken throughout the course of that relationship to ensure that the transactions being conducted are consistent with the institution’s or person’s knowledge of the customer, the business and risk profile, including, where necessary, the source of funds and ensuring that the documents, data or information held are kept up-to-date.

AUSTRAC, the Basel Committee and the EU have adopted the requirements for a KYC policy that are incorporated into banking practices. The KYC policy is one measure that can be used to improve customer due diligence within banking institutions and counter money laundering activities. Therefore, the due diligence a banking institution undertakes is to understand the customer and the potential risks for the bank when accepting them as a customer. The reporting duties by a banking institution are important and Cox notes that ‘it will not normally be sufficient ... just to accept information which is provided to them by customers at face value; ... the local jurisdictional requirements translating FATF Recommendations into local rules may purely require recording rather than investigating or confirming information’.¹⁷³

The Financial Action Task Force is the leading inter-governmental body that establishes international standards on how to combat money laundering and terrorism financing.¹⁷⁴ Furthermore, they ensure compliance by regulatory bodies are

¹⁷⁰Philip Ruce, ‘Anti-Money Laundering: The Challenges of Know Your Customer Legislation for Private Bankers and the Hidden Benefits for Relationship Management (“The Bright side of Knowing Your Customer”)’ (2011) 128(6) *The Banking Law Journal* 548, 549.

¹⁷¹Australian Transaction Reports and Analysis Centre, *Customer Due Diligence* (2016) <<http://www.austrac.gov.au/businesses/obligations-and-compliance/customer-due-diligence>>.

¹⁷²European Union Directive, European Parliament and the Council on the Prevention of the Use of the Financial System for the Purpose of Money Laundering and Terrorist Financing (2005) <<http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:309:0015:01:EN:HTML>>.

¹⁷³Cox, above n 79, 169.

¹⁷⁴Financial Action Task Force, *An Introduction to the FATF and its Work* (2010) <<http://www.fatf-gafi.org/media/fatf/documents/brochuresannualreports/Introduction%20to%20the%20FATF.pdf>>.

done through KYC polices and due diligence. Every so often, FATF publish a comprehensive framework of recommendations that countries (who are signatories to it) should follow. The first forty recommendations were set out in 1990 against money laundering activities and have been updated ever since.¹⁷⁵ The most important FATF recommendations, for the purpose of this thesis, include customer due diligence and record keeping (suspicious transaction reporting),¹⁷⁶ which are in line with Australian use of KYC policies.

The banks have a fiduciary duty towards their clients to act with the necessary care, skill and diligence and follow due process and record keeping.¹⁷⁷ Therefore, the banks need to have the following objectives in mind when implementing a KYC policy: (i) accepting only bona fide customers; (ii) customers need to be identified and communicated the risks involved; (iii) making use of reliable documentation to identify the customer; (iv) full-time monitoring of customer's accounts in order to detect a suspicious transaction; and (v) training people on the job to detect these transactions.¹⁷⁸ Therefore, KYC policies should be seen as an opportunity to provide customers with safe and efficient services.¹⁷⁹

In section 2.5 above, it was explained that banks are reluctant to accept Bitcoin as a payment system and legal currency because of certain risks involved such as money laundering and fraud. The reasoning behind this is explained by Dr Carmody:¹⁸⁰

From the point of view of a bank that is providing banking services, if we cannot satisfy ourselves that we can do all the things that we have to do under the legislation to understand the nature of the transactions and what is going on there, it puts us in a very difficult position to be able to provide those banking services. The issues are particularly intense when it comes to moving payments internationally, because obviously, we have counterpart banks to deal with globally and they have got their

¹⁷⁵Ruce, above n 170, 554.

¹⁷⁶This is the FATF's equivalent to the KYC policy. Recommendation five states that: 'Financial institutions should not keep anonymous accounts or accounts in obviously fictitious names... [and should] undertake customer due diligence measures, including identifying and verifying the identity of their customers...' – FATF Standards, *FATF 40 Recommendations* (2004) <<http://www.fatf-gafi.org/media/fatf/documents/FATF%20Standards%20-%2040%20Recommendations%20rc.pdf>>.

¹⁷⁷Demetra Arsalidou, *The Impact of Modern Influences on the Traditional Duties of Care, Skills and Diligence of Company Directors* (Kluwer Law, 2011) 39.

¹⁷⁸AUSTRAC, *Know Your Customer* (2008) <http://www.austrac.gov.au/203/intro_amlctf_know_your_customer.pdf>.

¹⁷⁹Ruce, above n 170, 558.

¹⁸⁰Parliament of Australia, above n 75, 22.

own anti-money laundering, counter-terrorism-finance obligations, and they will expect us to understand the nature of the payments as well.

However, Dr Carmody went further to explain how digital currencies can co-exist with the KYC requirements:¹⁸¹

There was an example given about a bitcoin broker who might have had a bank account with the Commonwealth Bank. If a cash payment came in then the bank would know, presumably, with the purchase of bitcoin. That is about all we would know. That is why there are a lot of advantages in the know-your-customer and due-diligence obligations also sitting with the broker, because the broker who has facilitated that purchase for the customer would also know, for example the wallet address that the customer used. Where they received that bitcoin that is not something the bank would know. If that did prove to be associated with suspicious activity that would then be something that could be provided under requests from law-enforcement authorities.

Therefore, in order for a banking institution to accept Bitcoin as a payment system or product and accommodate customers who want to make payments in this innovative way, the banks will, to an extent, not comply with the required KYC policy. This should clearly not happen as it violates the aim of putting in place these requirements to stay clear from money laundering activities. Until Bitcoin can be regulated to an extent where anti-money laundering legislation and KYC policies would apply to Bitcoin transactions, banking institutions will be reluctant to accept Bitcoin payments because of these risks.

3.3.5 Concluding Remarks

Steps to counter money laundering are ongoing and international bodies such as FATF and the Basel Committee are engaging with regulatory reform in this area especially in regard to virtual and digital currencies used as payment systems. The Australian Government is also seeking to address the issue of money laundering within Bitcoin transactions and whether robust legislation is needed in this regard. Therefore, this thesis argues that businesses and especially Bitcoin exchange

¹⁸¹Ibid 23-24.

platforms, which trade in Bitcoin, should put in place KYC policies to identify the user and the user's personal information. This would include obtaining identification of the user, then acceptance of the user, verification of the user's account and continuous monitoring of account login.¹⁸² Therefore, businesses will need to implement a similar policy regarding its users. This can be categorised as a 'know-your-user' ('KYU') policy that relates specifically to users of Bitcoin. Furthermore, the use of the public key, as discussed in Chapter 2, will increase the effectiveness of how Bitcoin transactions and customers will be linked to those transactions in order to monitor customer accounts more reliably.

Regulating virtual and digital currencies such as Bitcoin through AML/CFT legislation and in particular policing it through a KYC or KYU policy is a positive step towards the combating of illegal activities. A KYC policy aims to promote customer due diligence and safety of transactions within traditional payment systems.¹⁸³ However, because of the distinct nature of Bitcoin, as a payment system it is proving difficult to monitor or control within the current money laundering laws. Therefore, users still have the opportunity to use Bitcoin transactions for money laundering purposes, which is problematic to the monitoring and control of each user within the Bitcoin network. Therefore, the proposed KYU policies will mainly be combating money laundering activities within businesses such as money exchange platforms. Nevertheless, a further key challenge facing the regulation of Bitcoin is the legal nature and application of tax on Bitcoin transactions. The following section will discuss the legal implications of tax on Bitcoin transactions and how it is dealt with by the ATO.

3.4 Tax Challenges within Bitcoin Transactions

From barter to Bitcoin, dealing with tax has been challenging when it is applied to different transactions. However, with the technological development of Bitcoin in payment systems, tax challenges have become more problematic because of the unique characteristics of Bitcoin. This is a key challenge because businesses and

¹⁸²Australian Transaction Reports and Analysis Centre, *Know Your Customer (KYC)* (December 2008) 3-4.

¹⁸³Brian Volkman, 'Six Steps to a Better Know-Your-Customer Procedure' (2003) 22 *International Financial Law Review* 14, 14-15.

consumers who use Bitcoin as a payment method are generally ill-informed on whether these transactions attract tax and, if so, what type of tax.¹⁸⁴ Furthermore, users of Bitcoin can use this payment system as a means to avoid tax because of its anonymity and private features. As a result, in 2014 the ATO issued rulings relating to the taxation of Bitcoin transactions. The final submission of these rulings from the ATO was on 17 December 2014.¹⁸⁵ The aim of the draft rulings was to explain how Bitcoin transactions should be taxed and whether consumer compliance is necessary.¹⁸⁶ This was a step by the ATO to implement guidelines for businesses and consumers on how to deal with tax in accordance with Bitcoin transactions. However, the ATO did not discuss whether Bitcoin is considered legal tender or a legal currency in Australia.¹⁸⁷

The ATO explained that:¹⁸⁸

The tax office came to this issue with the approach that bitcoin transactions are happening and we need to provide some certainty for the community about what the tax treatment is with the tools we have available to us under the existing law. So the approach we took was to understand the technology, understand the business models, see if the existing law could or did apply and then to provide the advice. We took the approach of being as collaborative as possible. We worked with experts, industry associations-banking, finance, tax-and accounting professionals as well.

Therefore, the tax rulings are only seen as a set of guidelines to help those who deal in Bitcoin to be aware of the tax implications on transactions. Because more Australian businesses are using Bitcoin as a payment method, the tax implications, especially tax evasion, on these transactions need to be explored in order to protect businesses from any risks involved.¹⁸⁹ Moreover, when dealing with the treatment of

¹⁸⁴This thesis is limited to the key aspects on taxation law relating to Bitcoin and an in-depth discussion on tax law is beyond the scope of this thesis.

¹⁸⁵See Australian Taxation Office, *ATO Delivers Guidance on Bitcoin* (2014) <<https://www.ato.gov.au/Media-centre/Media-releases/ATO-delivers-guidance-on-Bitcoin/>>. See also Will Ockenden, *Bitcoin: Australian Tax Office to Release New Rules on Transactions* (10 June 2014) ABC <<http://www.abc.net.au/news/2014-06-10/australian-tax-office-release-new-rules-on-bitcoin-transactions/5511624>>.

¹⁸⁶These rulings will be discussed below and in Chapter 4.

¹⁸⁷Parliament of Australia, above n 75, 27.

¹⁸⁸*Ibid.*

¹⁸⁹Seth Litwack, 'Bitcoin: Currency or Fool's Gold?: A Comparative Analysis of the Legal Classification of Bitcoin' (2015) 29 *Temple International and Comparative Law Journal* 309, 326.

tax on Bitcoin, separate areas of tax law will refer to the different application of Bitcoin as ‘money’. Therefore, some areas might be treated as a commodity and some areas only as property.¹⁹⁰

3.4.1 *Overview of Tax and Bitcoin Transactions*

The last issue with the use of Bitcoin as a form of payment by businesses and consumers is how to treat taxation within Bitcoin payments. As explained in Chapter 2, Bitcoin transactions is supported by two parties accepting payment for goods or services and no third financial institution is involved, which makes it difficult for the ATO to trace these transactions. Thus, the undetectable nature of Bitcoin transactions lends itself to tax avoidance within transactions as it is not categorised as ‘money’ or legal tender. These Bitcoin transactions have also been classified as ‘a digital Cayman Island’.¹⁹¹ This is because Bitcoin has been created with the aim of keeping transactions private and anonymous and ultimately untraceable, which makes Bitcoin transactions suitable for tax evasion. The sections that follows examines the meaning of tax within Bitcoin transactions as well as tax evasion as a critical concern for the ATO in regard to virtual and digital currencies. This section will further take into account the word ‘money’ for tax purposes and whether the ATO intends to change the meaning of ‘money’ for tax purposes. However, the scope of this thesis is to consider the legal challenges Bitcoin creates in tax activities and tax evasion and will not focus on an in-depth discussion of taxation principles and laws.

3.4.2 *Bitcoin as ‘Money’ for GST Purposes*

Currently, the definition for ‘money’ under the *A New Tax System (Goods and Services Tax) Act* (‘*GST Act*’)¹⁹² includes:

- (a) currency (whether of Australia or of any other country); and
- (b) promissory notes and bills of exchange; and

¹⁹⁰See difference between commodity and property in Duran Bell, ‘Modes of Exchange: Gift and Commodity’ (1991) 20(2) *Journal of Socio-Economics* 155.

¹⁹¹Nicole Mirjanich, ‘Digital Money: Bitcoin’s Financial and Tax Future despite Regulatory Uncertainty’ (2014) 64 *DePaul Law Review* 213, 222.

¹⁹²*A New Tax System (Goods and Services Tax) Act 1999* (Cth).

- (c) any negotiable instrument used or circulated, or intended for use or circulation, as currency (whether of Australia or of any other country); and
- (d) postal notes and money orders; and
- (e) whatever is supplied as payment by way of:
 - (i) credit card or debit card; or
 - (ii) crediting or debiting an account; or
 - (iii) creation or transfer of a debt.¹⁹³

Furthermore, the *GST Act* states that ‘money’ does not include:

- (f) a collector’s piece; or
- (g) an investment article; or
- (h) an item of numismatic interest; or
- (i) currency the market value of which exceeds its stated value as legal tender in the country of issue.¹⁹⁴

For the purposes of these rulings, the ATO has considered that Bitcoin is a commodity rather than a currency for tax purposes; it has no intention of considering whether Bitcoin is seen as a legal currency.¹⁹⁵ This clearly indicates consistency between banking and tax law as Bitcoin is not recognised as a currency or legal tender but rather a commodity.

In order to consider Bitcoin as a currency for Goods and Services Tax (‘GST’) purposes, the definition of ‘money’ as well as ‘financial supplies’ would need to change.¹⁹⁶ This means that legislative changes to the *GST Act* would be required.¹⁹⁷

¹⁹³Ibid s 195.1.

¹⁹⁴Ibid.

¹⁹⁵Australian Taxation Office, Submission 8 to the Senate Economics References Committee, *Inquiry into Digital Currency*, November 2014, 5
<http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Submissions>.

¹⁹⁶Reg 40.5.9 of the *GST Act* defines a ‘financial supply’: ‘(1) The provision, acquisition or disposal of an interest mentioned in sub regulation (3) or (4) is a financial supply if: (a) the provision, acquisition or disposal is: (i) for consideration; and (ii) in the course or furtherance of an enterprise; and (iii) connected with the indirect tax zone; and (b) the supplier is: (i) registered or required to be registered; and (ii) a financial supply provider in relation to supply of the interest.

¹⁹⁷ATO Submission, above n 195, 3.

The ATO noted that changes to the definition of ‘financial supplies’ could be changed, but if this is undertaken without changing the definition of ‘money’ alongside ‘financial supplies’ it may create problems for businesses.¹⁹⁸

The ATO stated that:

This would make the supply of cryptocurrency input taxed. To the extent a business made acquisitions relating to the supply of Bitcoin (e.g. payments to a relevant point of sale provider) it would be blocked from claiming related input tax credits. This would not apply to businesses that are below the ‘financial acquisitions threshold’: see Division 189 of the Act.¹⁹⁹

If legislative change should be necessary, it would have to be approved by all states and territories. The ATO also treats Bitcoin transactions the same way as foreign transactions for the purposes of GST. The disadvantage of Bitcoin transactions being treated as barter transactions means that businesses will pay double tax on these transactions and as a result, the ATO noted that legislative change would be necessary for GST purposes.

As of March 2016, Treasurer Scott Morrison announced that virtual and digital currencies such as Bitcoin will be exempt from GST in order to boost the finance and technology sector.²⁰⁰ Treasurer Scott Morrison further stated that ‘we will ensure access to concessional tax treatments for venture capital investments in fintech firms, will take action to prevent the double taxation of digital currencies – we won’t be taxing digital currencies’.²⁰¹ One of the reasons the GST has been cancelled on virtual and digital currencies is because of companies leaving Australia who had no interest in paying GST on transactions when accepting Bitcoin as a payment

¹⁹⁸Ibid.

¹⁹⁹Ibid. The ATO further suggested that: ‘The GST is levied by the Commonwealth, but the revenue from the GST is distributed to the states and territories. This arrangement is set out in the Intergovernmental Agreement on Federal Financial Relations... Clause A14 provides that any proposal to vary the GST base will require the unanimous support of the States and Territory Governments, the endorsement by the Commonwealth Government and the passage [of] relevant legislation by both Houses of the Commonwealth Parliament. The requirement for unanimous agreement by the states and territories is legislated in Section 11 of the *A New Tax System (Managing the GST Rate and Base) Act 1999*. The ‘base’ of the GST refers to the range of goods and services to which the GST applies.’

²⁰⁰Shaun Drummond, ‘Scott Morrison Scraps GST on Bitcoin, Cuts Fintech Red Tape’, *Sydney Morning Herald* (online), 21 March 2016 <<http://www.smh.com.au/business/banking-and-finance/scott-morrison-to-scrap-gst-on-bitcoin-cut-fintech-red-tape-20160321-gnn28r.html>>.

²⁰¹Ibid.

system.²⁰² How GST will be applied to virtual and digital currencies such as Bitcoin, however, is still a work in progress.

3.4.3 Bitcoin as 'Property' for Income Tax and other Benefits

Currently, the ATO describes Bitcoin as 'property' rather than a currency for Income Tax and other tax benefit purposes (such as Fringe Benefit Tax).²⁰³ The Tax Institute of Australia disagreed with the ATO on this part of the tax treatment and argued that tax laws define currency and money in such broad terms as to include Bitcoin, for example, the *Income Tax Act*²⁰⁴ defines currency as including 'currency other than Australian currency'.²⁰⁵

The Tax Institute of Australia further explained that if a foreign country were to adopt Bitcoin as legal tender, then Bitcoin would fall within the meaning of 'currency of a foreign country' and 'currency other than Australian currency'. Therefore, the Tax Institute of Australia argued that 'Bitcoin would then automatically be required to be recognised as foreign currency for income tax and GST purposes, and money for Fringe Benefits Tax purposes. It is anomalous that such a situation could arise independently and outside the control of the Australian legislature or government bodies'.²⁰⁶

One other concern by the Bitcoin Association of Australia is that Fringe Benefits Tax ('FBT') is also seen as 'property' rather than 'money' by the ATO.²⁰⁷ This means that businesses who pay their employees with Bitcoins will be subject to FBT.²⁰⁸ The Tax Institution and Bitcoin Association of Australia both agree that Bitcoin, for FBT purposes, should fall within the definition of 'currency' and therefore be seen as wages and salaries and not subject to FBT.²⁰⁹

²⁰²Ibid.

²⁰³ATO, *Bitcoin on Income Tax*, TD 2014/D11, D12 and D13.

²⁰⁴*Income Tax Act 1997* (Cth).

²⁰⁵Ibid s 995-1.

²⁰⁶The Tax Institute, Submission 16 to the Senate Economics References Committee, *Inquiry into Digital Currency*, December 2014, 4 <<http://www.aph.gov.au/DocumentStore.ashx?id=9a5c96c7-e664-4455-9a3c-d0a831fcc07e&subId=302001>>.

²⁰⁷Australian Tax Organisation, *Bitcoin for Fringe Benefit Tax*, TD 2014/D14.

²⁰⁸The Tax Institute, above n 206.

²⁰⁹Parliament of Australia, above n 75, 35-36.

Apart from examining the effect Bitcoin transactions have on general tax transactions, the aim of this thesis is to also address the issue of tax evasion within Bitcoin transactions and how it is challenging for government authorities, like the ATO, to trace tax evasion activities within Bitcoin transactions.

3.4.4 Tax Evasion within Bitcoin Transactions

Tax evasion, which constitutes a tax crime, is not a new concept and has been around for many centuries.²¹⁰ However, in Australia, only a small percentage of people do not pay tax in such a way that can be categorised as a tax crime.²¹¹ According to the ATO, tax crime occurs:²¹²

[w]hen people abuse the tax and superannuation systems through intentional and dishonest behaviour with the aim of obtaining a financial benefit. It encompasses a broad spectrum of non-compliant activity that can result in criminal sanctions, such as fines or imprisonment.

With the advancement in technological payment systems, businesses and consumers became conscious of the fact that Bitcoin can be used as a means through which tax can be evaded when purchasing or selling goods or services with the intention to obtain a financial benefit through these decentralised payment networks.²¹³ Ly notes that ‘due to the anonymity provided by Bitcoin, there is the potential for individuals to withhold reporting Bitcoin-related income and thus evade taxes’.²¹⁴

According to Lehmann and Coleman, tax evasion can be described as ‘criminal falsification or non-disclosure as a means of reducing tax’ and falls within the

²¹⁰Robert McGee, Ken Devos and Serkan Benk, ‘Attitudes towards Tax Evasion in Turkey and Australia: A Comparative Study’ (2016) 5 *Social Sciences* 1, 2. Cf Valerie Braithwaite, ‘Dancing with Tax Authorities: Motivational Postures and Non-Compliant Actions’ in Valerie Braithwaite (ed), *Taxing Democracy: Understanding Avoidance and Evasion* (2003) 15; Richard Schwartz and Sonya Orleans, ‘On Legal Sanctions’ (1967) 34 *University of Chicago Law Review* 282; John Scholz and Ann Witte (eds), *Taxpayer Compliance: Vol 1 and Vol 2* (London, HMSO, 1989).

²¹¹Valerie Braithwaite, ‘Dancing with Tax Authorities: Motivational Postures and Non-Compliant Actions’ in Valerie Braithwaite (ed), *Taxing Democracy: Understanding Avoidance and Evasion* (2003) 15.

²¹²Australian Taxation Office, *Tax Crime Explained* (3 August 2015)

<<https://www.ato.gov.au/General/the-fight-against-tax-crime/tax-crime-explained/>>.

²¹³See, eg Benno Torgler and Kristina Murphy, ‘Tax Morale in Australia: What Shapes it and has it Changed over Time?’ (2004) 7 *Journal of Australian Taxation* 298.

²¹⁴Matthew Kien-Meng Ly, ‘Coining Bitcoin’s “Legal-Bits”: Examining the Regulatory Framework for Bitcoin and Virtual Currencies’ (2014) 27 *Harvard Journal of Law and Technology* 587, 595.

definition of tax evasion.²¹⁵ Therefore, tax evasion activities are illegal and extend to:²¹⁶

Contravention of the law whereby a person who derives a taxable income either pays no tax or pays less tax than he would otherwise be bound to pay. Tax evasion includes the failure to make a return of taxable income or a failure to disclose in a return the true income derived.

Similarly, in *Denver Chemical Manufacturing Co v Commissioner of Taxation (NSW)*,²¹⁷ the court stated that tax evasion is seen as ‘wilful attempts to evade their tax liability by submitting false information and records or by omitting any material or details that should have been disclosed’.²¹⁸ In the context of virtual and digital currencies, Marian notes that ‘Cryptocurrencies possess the two most important characteristics of a “traditional” tax haven. First, because there is no jurisdiction in which they operate (they are “held” in cyberspace accounts known as online “wallets”), they are not subject to taxation at source. Second, cryptocurrency accounts are anonymous. Users can start as many online “wallets” as they want to buy or mine Bitcoins and trade them without ever providing any identifying information’.²¹⁹ Therefore, the Bitcoin network, as a tax haven, makes it easier to evade tax because of its characteristics assisting with the anonymity and privacy of users and their information.²²⁰

Identifying tax evasion activities through the use of Bitcoin payments is a considerable policy issue. Presently, tax crimes, specifically tax evasion, is dealt with under the *Tax Administration Act 1953* (Cth) and the *Criminal Code Act 1995* (Cth) as well as *Income Tax Assessment Act 1997* (Cth). However, in 2015 the Australian Government introduced the Tax Laws Amendment (Combating

²¹⁵Geoffrey Lehmann and Cynthia Coleman, *Taxation Law in Australia* (Butterworths, 1994) 877.

²¹⁶KW Asprey and Ross Parsons, *Income Taxation in Australia: Principles of Income, Deductibility and Tax Accounting* (Law Book Co, 2001) chap 11, paras 11.1, 215. See also *R v Mears* (1997) 37 ATR 321, 323.

²¹⁷(1949) 79 CLR 296. See eg, *Kajewski v Federal Commissioner of Taxation* (2003) 52 ATR 455; *Australasian Jam Company Proprietary Limited v FCT* (1953) 88 CLR 23.

²¹⁸*Ibid* 313.

²¹⁹Omri Marian, ‘Are Cryptocurrencies Super Tax Havens?’ (2013) 112 *Michigan Law Review* 38, 42.

²²⁰See, eg, Sarah Gruber, ‘Trust, Identity, and Disclosure: Are Bitcoin Exchanges the Next Virtual Havens for Money Laundering and Tax Evasion?’ (2013) 32 *Quinnipiac Law Review* 135, 204.

Multinational Tax Avoidance) Bill 2015 (Cth)²²¹ that focuses on anti-avoidance regulation in regard to tax and will also replace most of the above-mentioned legislation. However, this Bill is not focused on tax evasion activities within virtual and digital currency transactions.

In 2012, the European Central Bank noted the following on Bitcoin and tax evasion activities:²²²

practically identical problems [to those posed by Bitcoin] can also occur when using cash . . . Cash can be used for drug dealing and money laundering too; cash can also be stolen, not from a digital wallet, but from a physical one; and cash can also be used for tax evasion purposes.

This is similarly viewed by Slattery who indicate that ‘tax evasion is an inherent problem in a cash-based tax system that relies on self-reporting, and is a significant problem in online transactions in fiat currency. Therefore, the scope of tax evasion and illegal activity in Bitcoin transactions may mirror or even exceed that of traditional cash transactions, but while Bitcoin may broaden the range of transactions that are likely to result in underreporting, the root of the problem exists independent of this technology’.²²³ The Australian Government is in the process of drafting a white paper regarding the regulation of Bitcoin for tax purposes.²²⁴ After consultation with numerous entities as well as recommendations from the Senate, the white paper will be updated and regulation of it remains to be seen. Bitcoin specific regulation in relation to tax evasion will be of interest to businesses and consumers dealing with Bitcoin as a payment system and how the Australian Government decides to regulate tax within Bitcoin transactions when evasion is present.

Australia, as seen above, is currently observing how to regulate the legal issues Bitcoin create such as tax and money laundering as well as being a financial product

²²¹Bill No. 45 2015-2016.

²²²European Central Bank, *Virtual Currency Schemes* (2012) 12
<<http://www.eeb.int/pub/pdf/other/virtualcurrencyschemes201210en.pdf>>.

²²³Thomas Slattery, ‘Taking a Bit out of Crime: Bitcoin and Cross-Border Tax Evasion’ (2014) 39 *Brooklyn Journal of International Law* 829, 860.

²²⁴Matthew Cridland, *Australia: GST and Bitcoin - Potential Pitfalls* (2014) DLA Piper <www.dlapiper.com.au>.

under financial services. However, it is not only necessary to consider the domestic framework but also an international framework in order to provide Australia with the required tools to regulate Bitcoin transactions on a more advanced level. The international framework will be discussed in Chapter 4 together with a regulatory overview of Bitcoin in regard to issues such as financial services and money laundering as well as treatment of tax under Bitcoin transactions.

3.5 Conclusion

The discussion on the elements of ‘money’ in Chapter 2 provides an important context to this chapter as it explained whether Bitcoin can be considered as legal tender and therefore a currency. In Chapter 2 it was concluded that Bitcoin, although fulfilling the elements of ‘money’, is not legal tender as stipulated under Australian law and therefore can create various legal challenges and issues for governments, businesses and consumers.

This chapter has examined three key legal issues, firstly, how the bank–customer relationship functions within a traditional banking and Bitcoin transaction and whether Bitcoin could be categorised as a financial product. Secondly, the use of Bitcoin for money laundering purposes is a major issue; however, even though it is not legal tender it can nonetheless be regulated under the AML/CTF legislation in Australia. Moreover, it was submitted that given how the KYC principle plays an important role in banking regulation, this principle should be applied to businesses and Bitcoin exchange platforms dealing with Bitcoin transactions in order to identify, monitor and control their users. Finally, the regulation of tax within Bitcoin transactions and more specifically the issue with tax evasion within Bitcoin transactions was examined and whether Bitcoin transactions are taxed as money or a commodity.

Given that Bitcoin is categorised as money, but not accepted as legal tender and hence not a legal currency, digital currencies like Bitcoin are not treated by banking institutions as a financial product. The RBA and *Payment Systems (Regulation) Act 1998* (Cth), unlike AML/CTF legislation, uniformly agree that Bitcoin should not be classified as a financial product at this stage and cannot be defined as such within

legislation in order to prevent ambiguity within the law. As a result of digital currencies like Bitcoin not being regulated as a financial product and because of its distinctive characteristics, banking institutions view Bitcoin as an insecure payment system for businesses and consumers. Therefore, it is concluded that Bitcoin is not a financial product; however, as discussed, it could be possible for Bitcoin to be regulated as a financial product in future.

Notwithstanding the use and potential benefits of Bitcoin, as mentioned in this chapter, Bitcoin is not favoured by banking institutions because of the risks involved.²²⁵ In particular, the risks associated with money laundering and tax evasion cause significant challenges for governments, businesses and consumers. It remains to be seen whether all financial institutions will accept Bitcoin transactions in some form, but because banks have certain regulatory frameworks in place in order to prevent money laundering from happening, such as the KYC policies, it is difficult to guarantee that financial institutions will accept this form of payment. This chapter further introduced the ‘know-your-user’ policy and whether such a policy will be within money exchange platforms dealing with Bitcoin. Even though unlawful activities such as money laundering will not be apprehended by law enforcement because of Bitcoins unique features, the KYC and KYU policies seem to provide a positive step towards countering money laundering activities on money exchange platforms.

The law relating to tax activities within Bitcoin transactions is somewhat clearer in regard to the rulings published by the ATO. As discussed in this chapter, the ATO has released a draft of rulings concerning the treatment of tax within different areas such as GST and Income Tax as well as FBT. It is clear from these rulings that the ATO did not consider whether Bitcoin is a ‘currency’ but mentioned that all transactions will be treated as a commodity or property alike. This certainly provided some assistance to understanding what transactions will be taxed when making payments with Bitcoin. One main change to these rulings came in March 2016 when Scott Morrison announced that there will be no tax applying on GST purchases when previously it applied. Further to this discussion, is the issue of tax evasion and how

²²⁵Paris Cowan, ‘Aussie Banks dump Bitcoin Traders’, *IT News* (online), April 2015 <<http://www.itnews.com.au/News/402458,aussie-banks-dump-bitcoin-traders.aspx>>.

governments find Bitcoin transactions challenging within this area of regulation. As pointed out, Bitcoin is a haven for tax evasion activities and users, who specifically deal with international transactions, find Bitcoin as a scapegoat to evading tax. This is an emerging area of law, especially with regard to regulation, and governments are urged to implement guidelines on how to deal with businesses and individuals evading tax through the Bitcoin network.

These challenges in Australia, together with uncertainty of how the law will deal with them, are central to the implementation of some form of regulation by governments. The regulation of Bitcoin has generated much debate globally²²⁶ and different governments have had to make decisions regarding regulation and how to deal with the day-to-day Bitcoin transactions and associated issues according to law.²²⁷ Globally, therefore, uncertainty exists as to how Bitcoin should be treated and regulated. There exist different approaches in different countries and therefore it will be valuable to have some consistency regarding these issues on a global scale.

The next chapter will therefore focus on the adequate implementation and regulation of Bitcoin within Australia and specifically examine the regulation of Bitcoin within the context of the key legal issues discussed in this chapter. The next section will also introduce an international perspective on how other jurisdictions deal with Bitcoin, with specific reference to the US, Canada and the EU. Given that Bitcoin is a recent phenomenon with a global impact on the banking industry, an examination of international jurisdictions is useful for gaining insight into international trends in regulation and whether Australia can follow in their footsteps when considering a regulatory framework for Bitcoin as a payment system.

²²⁶See Evan Hewitt, 'Bringing Continuity to Cryptocurrency: Commercial Law as a Guide to the Asset Categorization of Bitcoin' (2016) 39 *Seattle University Law Review* 619; Paul Farmer, 'Speculative Tech: The Bitcoin Legal Quagmire & the Need for Legal Innovation' (2014) 9 *Journal of Business and Technology Law* 85.

²²⁷See Jonathan Turpin, 'Bitcoin: The Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework' (2014) 21 *Indiana Journal of Global Legal Studies* 335.

CHAPTER 4

A REGULATORY FRAMEWORK FOR BITCOIN IN AUSTRALIA

4.1 Introduction

From barter to Bitcoin, technology has developed over the years in making it possible for society to trade in goods and services with virtual and digital currencies. This has advantages for businesses and consumers as discussed in Chapter 2; however, it can also negatively affect users when making use of Bitcoin as a payment system because of its decentralised unregulated status.

Some governments have issued guidance notes to consumers and businesses that use or would like to use Bitcoin as a payment system. These guidance notes aim to ensure that consumers and businesses are informed about the advantages and disadvantages of its use and whether Bitcoin can be treated as money and therefore legal tender. In Chapter 2 it was discussed that Bitcoin, as a digital currency, fulfils the three functions of money, namely it serves as a medium of exchange, store of value and unit of account; however, it is generally not recognised by governments as legal tender. Because of this and given its anonymous characteristics, the use of Bitcoin gives rise to various legal issues.

These legal issues were examined in Chapter 3 with a focus on the bank–customer relationship and the distinction between traditional banking transactions and Bitcoin transactions, the misuse of the Bitcoin payment systems to engage in money laundering activities (and the role of the KYC policy) and lastly the treatment of tax within Bitcoin transactions as well as the issue of tax evasion involving Bitcoin transactions. These legal issues raise questions about regulation and whether digital currencies like Bitcoin should be regulated, and if so, how. As noted by Tu and Meredith, regulation of Bitcoin is challenging and ‘does not fit neatly into existing models of regulation’. Therefore, the need for regulation of the particular legal issues discussed in Chapter 3 will be considered in this chapter in order to establish an

appropriate approach to regulating Bitcoin within each of the legal issues and their regulatory structure.

With the advent and increased use of Bitcoin, it is argued that governments need to consider some level of regulation regarding the use of Bitcoin by businesses and consumers in order to address these key legal issues. It is submitted that without appropriate regulation, both businesses and consumers who utilise Bitcoin as a payment method will not be protected under the law.

This chapter will therefore examine the extent to which selected jurisdictions regulate Bitcoin and potential gaps in the regulation of Bitcoin. The chapter further considers what, if any, regulations are needed to address the legal issues that were canvassed and discussed in Chapter 3. Therefore, the first part of this chapter will deal with the different approaches to regulation in an international context. This will be followed by a discussion on the scope of regulation in terms of money laundering and tax laws relating to Bitcoin in selected jurisdictions, namely the US, Canada and the EU. These jurisdictions are considered with a view to examining the nature and scope of regulation to gain a better insight into how jurisdictions are responding to the use of Bitcoin and protections against misuse.¹ Against this international context, the second part of this chapter will in turn analyse the current regulatory framework in Australia regarding the circumstances surrounding Bitcoin as legal tender or legal currency, money laundering and tax evasion. The last part of this chapter will discuss whether Australia needs a more substantive regulatory framework with regards to Bitcoin transactions and the possible regulatory approach that should be taken.

¹It is beyond the scope of this thesis to consider developments in numerous jurisdictions. The three jurisdictions that have been selected serve as exemplars of approaches taken to regulating Bitcoin. For a discussion on other countries see Stephen Small, 'Bitcoin: The Napster of Currency' (2015) 37 *Houston Journal of International Law* 581; Global Legal Research Directorate Staff, *Regulation of Bitcoin in Selected Jurisdictions* (January 2014) The Law Library of Congress 1 <<http://www.loc.gov/law/help/bitcoin-survey/regulation-of-bitcoin.pdf>>; Ethan Jeans, 'Funny Money or The Fall of Fiat: Bitcoin and Forward-facing Virtual Currency Regulation' (2015) 13 *Colorado Technology Law Journal* 99.

4.2 Approaches to the Regulation of Bitcoin

As noted, with the creation of Bitcoin as a relatively new and emerging payment system, it is helpful to consider the different approaches taken internationally on the regulation of Bitcoin as well as the approach taken in Australia.

The regulation of Bitcoin by countries through banking institutions, businesses and consumers is different on numerous levels and there is still little unanimity with regard to the regulation of Bitcoin globally.² However, the regulation of Bitcoin by countries can be categorised into three broad classes:

- (i) stringent control and legal banning of the use of Bitcoin;
- (ii) a ‘wait and see’ approach as to what direction other countries might take to regulate Bitcoin; and
- (iii) the implementation of specific Bitcoin regulations.³

The following section will provide a brief outline of these approaches to Bitcoin regulation. These approaches will follow with a discussion of the selected jurisdictions that fall within the below mentioned approaches and how each jurisdiction regulates the use of Bitcoin as a payment system.

4.2.1 Stringent and Legal Banning of the Use of Bitcoin

Some countries, notably China, have imposed rigorous regulations to ban Bitcoin and therefore the use of Bitcoin by consumers and businesses. This approach has been taken by some countries who believe that there is no need for the use of virtual or digital currencies.⁴ In particular, China has either put in place strict regulations banning Bitcoin as a currency or restricted financial institutions in accepting and

²Kelly McConnell, Submission 22 to the Senate Economics References Committee, *Inquiry into Digital Currency*, December 2014, 37
<<http://www.aph.gov.au/DocumentStore.ashx?id=46d34817-cdc7-42a5-97ec-e3ff59bd6634&subId=301945>>.

³Ibid. See also Rhys Bollen, ‘The Legal Status of Online Currencies: Are Bitcoins the Future?’ (2013) *Journal of Banking and Finance Law and Practice* 1.

⁴These countries include Russia, Iceland, India and Sweden. This part will only focus on China and the European Union as exemplars. See also Rahul Gupta, *What Bitcoin Regulation Looks Like Around the World* (16 November 2015) Investopedia
<<http://www.investopedia.com/articles/investing/120314/where-bitcoin-regulated.asp>>.

dealing with Bitcoin.⁵ For example, the People's Bank of China has restricted the selling of digital currencies such as Bitcoin because it is not recognised as a currency or subject to centralised control.⁶ The People's Bank of China specifically noted that:⁷

Ordinary people have the freedom to participate [in buying and selling Bitcoin], provided they assume the risks themselves. Next, the People's Bank will work with the relevant ministries to supervise the financial institutions, payment institutions and websites that provided Bitcoin registration, trading and other services [...] the People's Bank will continue to pay close attention to the movements of Bitcoin and associated risks.

Similarly, the People's Bank of China, Ministry of Industry and Information Technology of China, China Securities Regulatory Commission, China Banking Regulatory Commission and the China Insurance Regulatory Commission Notice on the Prevention of Risks Associated with Bitcoin clearly indicate that financial and payment institutions:⁸

may not use Bitcoin pricing for products or services, may not buy or sell Bitcoins, may not act as a central counterparty in Bitcoin trading, may not offer insurance products associated with Bitcoin, may not provide direct or indirect Bitcoin-related services to customers, including: registering, trading, settling, clearing or other services; accepting Bitcoin or use of Bitcoin as a clearing tool; trading Bitcoin with CNY or foreign currencies; storing, escrowing, and mortgaging in Bitcoin; issuing Bitcoin-related financial products; and using Bitcoin as a means of investment for trusts and funds.

⁵Laurie Rosini, *Virtual Currency Report* (2016) Perkins Coie <<https://www.virtualcurrencyreport.com/>>. See also Bloomberg View, *Time for Smarter Rules on Digital Money* (27 February 2014) Bloomberg Businessweek <<http://www.businessweek.com/articles/2014-02-27/bitcoin-exchange-mt-dot-goxx-collapse-shows-need-for-regulation>>.

⁶Joseph Cook, 'Bitcoin: Technological Innovation or Emerging Threat?' (2014) 30(3) *John Marshall Journal of Information Technology & Privacy Law* 535, 561.

⁷Matthew Ponsford, 'Comparative Analysis of Bitcoin and Other Decentralised Virtual Currencies: Legal Regulation in the People's Republic of China, Canada and the United States' (2015) 9 *Hong Kong Journal of Legal Studies* 29, 39.

⁸Bank Notice [2013] No. 289. See eg, Jonathan Turpin, 'Bitcoin: The Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework' (2014) 21(1) *Indiana Journal of Global Legal Studies* 335, 344.

It is evident that China has sought to ban the use of Bitcoin by banking institutions in China because of the challenges and confusion concerning the legal status of Bitcoin, money laundering and tax evasion.⁹ Furthermore, the former Federal Reserve Chairman in China noted that Bitcoin ‘represents an unofficial leakage to the current monetary system and trades globally. It is difficult to regulate and could be used for money laundering’.¹⁰ Ramasastry is of the view that China appears to be banning the use of Bitcoin in this way in order to avoid harm to the public and also to protect their current legal currency against any misuse.¹¹ However, Doguet argues that a ban on the use of Bitcoin ‘would do little more than stop the majority of law-abiding individuals from using the digital currency out of the fear of prosecution, while “Bitcoin criminals” would not likely be deterred because they were already engaging in illegal activities’.¹²

Therefore, the banning of Bitcoin in a country and as a legal currency is unlikely to be an effective system or approach to regulating Bitcoin, especially given its characteristics and the way in which it operates outside traditional payment systems.¹³ This has been evident through virtual and digital exchange platforms disregarding and overlooking the Chinese Government’s ban on the use and production of Bitcoin through Bitcoin applications (apps) as it is not linked to any banking institution.¹⁴ The motivation behind countries such as China banning the use of virtual and digital currencies is because Bitcoin is amenable to illegal activities such as money laundering and terrorist financing within that particular country and

⁹The People’s Bank of China, *The People’s Bank of China and Five Associated Ministries Notice: Prevention of Risks Associated with Bitcoin* (3 December 2013) BTCC <<https://exchange.btcc.com/page/bocnotice2013>>.

¹⁰Steven Yang and Simon Lee, ‘China Bans Financial Companies From Bitcoin Transactions,’ *Bloomberg News* (online), 5 December 2013 <<http://www.bloomberg.com/news/articles/2013-12-05/china-s-pboc-bans-financial-companies-from-bitcoin-transactions>>.

¹¹Anita Ramasastry, *Bitcoin: If You Can’t Ban It, Should You Regulate It? The Merits of Legalization* (25 February 2014) *The Verdict* <<https://verdict.justia.com/2014/02/25/bitcoin-cant-ban-regulate>>. See also Gerry Mullany, ‘China Restricts Banks’ Use of Bitcoin’, *New York Times* (online), 6 December 2013 <http://www.nytimes.com/2013/12/06/business/international/china-bars-banks-from-using-bitcoin.html?_r=0>.

¹²Joshua Doguet, ‘The Nature of the Form: Legal and Regulatory Issues Surrounding the Bitcoin Digital Currency System’ (2013) *73 Louisiana Law Review* 1119, 1151.

¹³See in general Matthew Shillito and Rob Stokes, *Governments Want to Regulate Bitcoin – Is That Even Possible?* (March 2015) *The Conversation* <<http://theconversation.com/governments-want-to-regulate-bitcoin-is-that-even-possible-39266>>.

¹⁴Grace Zhu, ‘China Central Bank Warns Banks on Bitcoin’, *The Wall Street Journal* (online), 7 May 2014 <<http://online.wsj.com/articles/SB10001424052702304655304579547251552490962>>.

potential consumers or businesses making use of this system will not be protected under law.¹⁵ Therefore, more constructive approaches are needed to develop appropriate regulation, whether through legislation or legal guidelines, that will create greater legal certainty and increase the rights and remedies of consumers and businesses using Bitcoin as a payment system.¹⁶ Furthermore, the International Monetary Fund argues that countries need to focus on participating in a global economy collectively as there can be significant economic uses within regulation of virtual and digital currencies such as Bitcoin.¹⁷ This will create equilibrium between the regulation of Bitcoin and the benefits the Bitcoin system has for businesses, consumers and governments.

Countries that seek to ban the use of Bitcoin and restrict banking institutions in changing traditional currency for Bitcoins are likely to fall behind other countries in regulation and those countries that keep an open mind regarding the regulation of Bitcoin as a legal currency or regulated payment system. As Hill also argues these countries further ‘forego the opportunity to help create law in this under-developed area and to assist in building banking, criminal and consumer protection’.¹⁸ In contrast to this approach, the following section considers the ‘wait-and-see’ approach adopted by some countries who have taken a more cautious approach to regulation while at the same time recognising the use of Bitcoin.

4.2.2 *Observing other Countries (‘Wait-and-See’)*

Some countries appear to have adopted a ‘wait-and-see’ approach to ascertain how other countries implement the regulation of Bitcoin into their laws, how effective it is when dealing with the different legal issues and how Bitcoin evolves.¹⁹

¹⁵See discussion on risks in Chapter 3.

¹⁶See eg, Jay Kesan and Rajiv Shah, ‘Shaping Code’ (2005) 18 *Harvard Journal of Law and Technology* 319, 328.

¹⁷International Monetary Fund, *Virtual Currencies and Beyond: Initial Considerations* (2016) Monetary and Capital Markets, Legal, and Strategy and Policy Review Departments 35-37 <<https://www.imf.org/external/pubs/ft/sdn/2016/sdn1603.pdf>>. For example, developing countries who can access banking services. See also Jonathan Turpin, ‘Bitcoin: The Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework’ (2014) 21(1) *Indiana Journal of Global Legal Studies* 335, 367.

¹⁸Austin Hill, *Bitcoin: Is Cryptocurrency Viable?* (Claremont McKenna College Thesis, 2014) 29.

¹⁹Franziska Boehm and Paulina Pesch, *Bitcoin: A First Legal Analysis with reference to German and US-American Law* (2015) Institute for Information, Telecommunication, and Media Law, University of Münster, Germany

The ‘wait-and-see’ approach has three distinct features.²⁰ Firstly, some countries have not implemented laws regulating Bitcoin, but have issued notices to businesses and consumers who want to use Bitcoin as a payment system indicating the risks associated with it.²¹ An example is the notice provided by ASIC to businesses and consumers raising awareness on how this new payment technology works.²² Secondly, consumers and businesses that use Bitcoin as a payment system and ‘are prepared to accept the risk should be allowed to do so’ are given the independence to make use of Bitcoin in a valuable and beneficial way.²³ Lastly, Bitcoin as a payment system has the feature to be self-regulated, to some extent. This will be helpful to regulators as self-regulation will assist in the regulation against illegal activities and whether Bitcoin is classified as a financial product and hence a legal currency to be used by businesses and consumers as a payment system.²⁴

According to the Australian Senate’s report on the possible regulation of digital currencies in Australia, the Senate aims to propose an appropriate way of defining digital currencies under Australian legislation that will guarantee stability within the banking industry; safeguard businesses and consumers against the illicit activities promoted through Bitcoin; and encourage competition within the digital currency market.²⁵ The proposal of how to clearly deal with digital currencies, as a defined

http://www.uni-muenster.de/Jura.itm/hoeren/materialien/boehm_pesch/BTC_final_camready.pdf.

Another example is Sweden implementing similar laws on Bitcoin taxation.

²⁰Russ Marshall, ‘Bitcoin: Where Two Worlds Collide’ (2015) 27 *Bond Law Review* 89, 104. See also Deloitte, ‘Virtual Currency: Bitcoin and Beyond Part 2’, *The Wall Street Journal* (online), 25 June 2014 <<http://deloitte.wsj.com/cio/2014/06/25/virtual-currency-bitcoin-and-beyond-part-2/>>.

²¹Philippe Marini, *Regulation & Innovation: Public Authorities and the Development of Virtual Currencies* (4 August 2014) Senate, Commission Des Finances <<http://www.senat.fr/rap/r13-767/r13-767-syn-en.pdf>>. For example, the Netherlands have issued warnings to businesses and consumers using Bitcoin and warned against the risks – Tessa Hoser et al, *Bitcoin and your Business: What you Need to Know* (July 2014) Norton Rose Fulbright <<http://www.nortonrosefulbright.com/knowledge/publications/119023/bitcoin-and-your-business-what-you-need-to-know>>.

²²Australian Securities and Investment Commission, *Op-Ed Blockchain* (October 2015) <<http://asic.gov.au/about-asic/media-centre/asic-responds/op-ed-blockchain>>.

²³Jerry Brito and Andrea Castillo, *Bitcoin: A Primer for Policymakers* (Mercatus Center, 2013) 38. See also the statement by the Reserve Bank of Australia’s Governor - Laurie Rosini, *Virtual Currency Report* (2016) Perkins Coie <<https://www.virtualcurrencyreport.com/>>.

²⁴Andres Guadamuz and Chris Marsden, ‘Blockchains and Bitcoin: Regulatory Responses to Cryptocurrencies’ (2015) 20(12) *First Monday* 1, 24. See also Jon Southurst, *Australian Lawyers, Bitcoin Groups Call for Clarity on Regulation* (18 July 2014) Coindesk <<http://www.coindesk.com/australian-lawyers-bitcoin-groups-call-clarity-regulation/>>.

²⁵See specifically Parliament of Australia, The Senate, Economics References Committee Report, *Digital Currency – Game Changer or Bit Player* (August 2015)

payment system under Australian law, is still within a ‘wait-and-see’ approach until virtual and digital currencies like Bitcoin present a concern to the banking industry and to the protection of businesses and consumers.²⁶

For example, Australia has recognised that Bitcoin be taxed according to the different kinds of transactions and is also considering regulation of money laundering issues within existing legislation. The question remains whether Australia will regulate Bitcoin as a financial product and therefore a legal currency. This thesis has argued in Chapter 2 that Bitcoin fulfils the functions of money but is not considered legal tender in Australia. Therefore, an observing position on whether other countries will accept Bitcoin as legal tender and how it will affect the valuation of such a currency has been adopted.

4.2.3 *The Implementation of Specific Bitcoin Regulation*

Virtual and digital currencies such as Bitcoin are still very new in terms of regulation. Only a few countries, including the United State and Canada, have implemented specific Bitcoin regulation regarding the use of Bitcoin.²⁷ However, this regulation is only applied within specific areas of law. This chapter examines the US and Canada in regard to their implementation of specific Bitcoin regulation in relation to money laundering activities. These countries have introduced regulation on money laundering and reporting duties to identify reporting agencies such as the Financial Crimes Enforcement Network and Financial Transactions and Reports

<http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Report>.

²⁶Goldberg et al explain that: It is clear that regulators need to develop thoughtful, innovative and sensible policies that protect the public without stifling crypto-currency innovation and the resulting potential for economic growth. An overly cautious and ill-considered legislative response is likely to have significant implications for Bitcoin’s utility in Australia in the short term, and ultimately the question as to whether Australia can take a leading role in promoting FinTech and e-commerce or whether we will be playing catch-up with other jurisdictions who more nimbly seize these opportunities - Daniel Goldberg, Jamie Nettleton, Elizabeth Cameron and Sophia Ulrich, *Bitcoin Regulation in Australia: A Bit of a Task to Coin* (19 December 2014) Addisons

<http://www.addisonslawyers.com.au/knowledge/Bitcoin_Regulation_in_Australia__A_Bit_of_a_Task_to_Coin716.aspx>.

²⁷Singapore and Italy have also adopted Bitcoin specific regulation. See Rhys Bollen, ‘The Legal Status of Online Currencies: Are Bitcoins the Future?’ (2013) *Journal of Banking and Finance Law and Practice* 1.

Analysis Centre of Canada.²⁸ Furthermore, these countries have been able to adapt existing laws and integrate Bitcoin into their current regulatory structure.²⁹

Both the US and Canada, as discussed below, validate the regulation of Bitcoin through existing and new laws and by controlling exchange platforms and businesses dealing with the selling and acceptance of Bitcoin (such as certain financial institutions), therefore reducing illegal money laundering activities.³⁰ Through this regulation, both countries have shown their commitment to take legal action against users dealing with Bitcoin on an illegal basis.³¹ For example, in the US, the *Money Laundering Control Act*³² was amended to include the prosecution of money laundering criminals who use Bitcoin platforms as a form for illegal money laundering activities.³³ Similarly, Canada has introduced a new piece of legislation dealing with money laundering activities within Bitcoin transactions.³⁴ It is Bitcoin specific and corresponds with existing money laundering legislation. This has been a positive step towards effective implementation of regulation regarding digital currencies; however, none of these countries have specifically regulated Bitcoin as legal tender or legal currency into their law. It remains to be seen whether Bitcoin will be categorised as a financial product.

The effective implementation of regulation specific to virtual and digital currencies like Bitcoin seems encouraging, especially when dealing with illegal activities on a platform designed to be decentralised and anonymous. However, regulators in

²⁸McConnell, above n 2. Australian Transaction Reports and Analysis Centre in Australia.

²⁹Marini, above n 21. It is still important for countries to be bound by their criminal and contract laws when taking into account the regulation of Bitcoin.

³⁰See Jeffrey Sparshott, 'Regulator on Bitcoin: Same Rules Apply', *The Wall Street Journal* (online), August 2013 <<http://online.wsj.com/news/articles/SB10001424127887323407104579037301852662422>>.

³¹See in general Reuben Grinberg, 'Bitcoin: An Innovative Alternative Digital Currency' (2011) 4 *Hastings Science & Technology Law Journal* 159.

³²*Money Laundering Control Act* 1986, Pub. L. No. 99-579, 100 Stat. 3207-18 to 21.

³³*Ibid* ss 1956, 1957.

³⁴Bill-C31 (Statutes of Canada 2014). For a discussion on Bitcoin accepted as legal currency, see Jens Munzer, *Bitcoins: Supervisory Assessment and Risks to Users* (February 2014) BaFin <http://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Fachartikel/2014/fa_bj_1401_bitcoins_en.html>. Most countries, except Germany, have indicated that virtual and digital currencies such as Bitcoin will be seen as a commodity rather than a currency and therefore apply to the rules of barter transactions. According to the Federal Financial Supervisory Authority (BaFin) in Germany, Bitcoin has been accepted as a financial instrument under law, but it is still not seen as a legal currency on its own.

countries like the US and Canada need to be careful not to suppress the benefits Bitcoin have for businesses and consumers through over-regulation.³⁵

4.2.4 Concluding Remarks

Different governments have implemented different approaches to regulation of Bitcoin transactions in order to protect consumers and businesses. The first approach where countries like China ban the use of Bitcoin, either through regulation or through financial institutions distributing Bitcoin, is not sufficient as it will negatively influence the technology used to create Bitcoin.³⁶ Therefore, the first approach to banning the use of Bitcoin simply seems ineffective. This thesis argues that countries banning the use of Bitcoin through regulation need to rather focus on implementing sufficient guidelines suitable to their law rather than giving it a ‘cold shoulder’.³⁷

Following this, the ‘wait-and-see’ approach is followed by other countries in regard to the regulation of Bitcoin and its uses. Countries like Australia, Canada and the US can all be classified under this approach, but they have somewhat different positions on whether Bitcoin is legal tender for tax purposes and for regulating money laundering activities. Australia has a wait-and-see approach with regards to taxation and money laundering activities, whereas the US and Canada falls within this approach in relation to tax regulation and Bitcoin transactions. Currently, the Australian Senate and the ATO have published guidelines on the treatment of Bitcoin in regard to tax but is still waiting to see how other countries implement legislation regarding tax and money laundering and whether it is considered legal tender.³⁸ Furthermore, guidelines issued in Canada and the US suggest that Bitcoin is regarded as a commodity for tax purposes.

Lastly, the implementation of specific regulation regarding the use of Bitcoin has been an approach in the US and Canada in regard to money laundering only. Canada

³⁵Matthew Ly, ‘Coining Bitcoin’s “Legal Bits”’: Examining the Regulatory Framework for Bitcoin and Virtual Currencies’ (2014) 27(2) *Harvard Journal of Law and Technology* 587, 608.

³⁶Brito and Castillo, above n 23, 39.

³⁷Sam Hampton, ‘Undermining Bitcoin’ (2016) 11(4) *Washington Journal of Law, Technology & Arts* 331, 352.

³⁸See Parliament of Australia, above n 25.

has passed a Bill into Parliament to regulate money laundering and terrorist financing activities in banking transactions. The US has introduced similar measures; however, they included it into existing money laundering legislation. The implementation of amended existing legislation by these countries show support for a war against money laundering, tax evasion as well as whether it is classified legal tender or not.

Accordingly, the regulation of virtual and digital currencies will be discussed through considering international approaches to Bitcoin transactions. This section will examine the US, Canada and EU on their approach to regulation of Bitcoin transactions and specifically consider the challenges within each framework.

4.3 Regulation of Bitcoin in an International Context: the European Union, United States and Canada

This part of the chapter will explore more closely the regulation of legal issues created by Bitcoin in the US, Canada and the EU. This discussion relates to how virtual and digital currencies such as Bitcoin are regulated on an international level within selected jurisdictions.³⁹ The discussion on the US, Canada and the EU will serve to illustrate the different regulatory frameworks, or lack thereof, relating to tax and money laundering activities and whether these countries recognise Bitcoin as money and hence legal tender.

4.3.1 European Union

The regulation of Bitcoin in the EU has been gradually identified as a payment system; however, the legal framework on whether to ban the use of Bitcoin through regulation is still unclear because of ‘credit, liquidity and operational risks’.⁴⁰ This is stated because of the banking industry’s precarious credit status following the Global Financial Crisis. The fact that banking institutions are in such a position means consumers and businesses can be at risk in regard to money laundering and tax evasion activities when using Bitcoin as a payment system in an unregulated context.

³⁹A discussion on the regulation of Bitcoin within all countries fall outside of the scope of this thesis. The thesis also does not purport to be a fully comparative study. These three jurisdictions are used as exemplars for discussion to examine different approaches to and levels of Bitcoin regulation.

⁴⁰Jonathan Turpin, ‘Bitcoin: The Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework’ (2014) 21 *Indiana Journal of Global Legal Studies* 335, 363.

The discussion on the regulation of Bitcoin within the EU is useful because of the different approaches taken by the EU in relation to Bitcoin being a legal currency and how money laundering and tax evasion activities are being dealt with in current legislation. However, the ambiguity of Bitcoin regulation in the EU leads to legal consequences faced by consumers and businesses. This part of the chapter will therefore examine whether Bitcoin is considered legal tender in the EU and whether the EU has introduced any regulation for money laundering and tax evasion activities within Bitcoin transactions when used as a payment system.

4.3.1.1 Bitcoin as Legal Tender

Despite the EU's lack of Bitcoin regulation, the EU recognises the legal use of Bitcoin as a payment system.⁴¹ However, the European Central Bank has held that Bitcoin is 'a form of unregulated digital money that is not issued or guaranteed by a central bank and that can act as means of payment'.⁴² Likewise, the European Banking Authority ('EBA') explains that 'Bitcoin is a form of unregulated digital money that is not issued or guaranteed by a central bank and that can act as means of payment'.⁴³ Therefore, Bitcoin acts as a means of payment because it fulfils the three functions of money and is recognised as a commodity under the *Agreement on the European Economic Area*.⁴⁴

The current laws on the regulation of Bitcoin as legal tender in the EU are still unclear, but in recent years the EU has argued that Bitcoin could possibly fall within the European Union's Electronic Money Directive ('the Directive').⁴⁵ However, there is still doubt as to whether Bitcoin should be considered and used in the EU

⁴¹Gautham, *European Union Pushes Away Bitcoin Regulation for Now* (26 April 2016) NewsBTC, <<http://www.newsbtc.com/2016/04/26/european-union-pushes-away-bitcoin-regulation-for-now/>>.

⁴²European Central Bank, *Virtual Currency Schemes* (October 2012) <<http://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf>>. See also Seth Litwack, 'Bitcoin: Currency or Fool's Gold: A Comparative Analysis of the Legal Classification of Bitcoin' (2015) 29 *Temple International & Comparative Law Journal* 309-348.

⁴³European Banking Authority, *Warning to Consumers on Virtual Currencies* (EBA 2013) <www.eba.europa.eu/documents/10180/1098344/EBA+Warning+on+Virtual+Currencies&jxdf>.

⁴⁴*Agreement on the European Economic Area* [1941] OJ L3 art 1(b)-(c). See also Seth Litwack, 'Bitcoin: Currency or Fool's Gold: A Comparative Analysis of the Legal Classification of Bitcoin' (2015) 29 *Temple International & Comparative Law Journal* 309-348.

⁴⁵2009/110/EC.

and whether regulation is needed. The EU has noted that Bitcoin is legal to use, but is unregulated and therefore not legal tender.⁴⁶

As mentioned in Chapter 2, Bitcoin fulfil the functions of money and in this case, it can be compared to electronic money in order to see whether Bitcoin can fall within the Directive. There are three conditions within the Directive to meet the definition of electronic money: (i) storing money electronically; (ii) the receipt of funds should not be less in value than the monetary value; and (iii) undertakings, other than the issuer, should accept it as a form of payment.⁴⁷ The European Central Bank has indicated that although virtual and digital currencies such as Bitcoin fulfil the first and last requirement under the Directive, it still lacks the second requirement and there was no intention by the EU to include virtual and digital currencies such as Bitcoin into the Directive.⁴⁸

Furthermore, because Bitcoin is an unregulated payment system, consumers and businesses may not be aware that Bitcoin is not a regulated payment service provider or financial provider, which may result in numerous consumer law issues within the banking sector. According to the EU *Payment Service Directive*,⁴⁹ which is only applicable within the EU, it classifies different payment service providers such as credit institutions⁵⁰ and electronic institutions.⁵¹ Contemplating the characteristics of the Bitcoin system, it cannot be considered a credit or electronic institution⁵² as it is not a legal entity and is not regulated by a central authority such as the EBA.

Against this background, the next section will focus on how Bitcoin is, or may be, regulated under money laundering laws despite the Bitcoin not being considered

⁴⁶European Central Bank, *Virtual Currency Schemes* (ECB Publications 2012) <www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf>.

⁴⁷Above n 45, art 2(2).

⁴⁸Attorney General's Department, Submission 42 to the Senate Economics References Committee, *Inquiry into Digital Currency*, December 2014, 14 <http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Submissions>.

⁴⁹Directive 2007/64/EC.

⁵⁰*Credit Institution Directive* 2013/36/EU, art 4, par 1 states a credit institution as: 'an undertaking the business of which is to take deposits or other repayable funds from the public and to grant credits for its own account.'

⁵¹Above n 45, art 2.

⁵²*Electronic Money Directive* 2009/110/EC, art 2(1) states an electronic institution as: 'a legal person that has been granted authorisation ... to issue electronic money.'

legal tender and the EU's position in regard to money laundering activities within Bitcoin transactions.

4.3.1.2 Money Laundering

The first enacted law on money laundering in the EU was the Anti-Money Laundering and Financing of Terrorism Directives⁵³ in 1991. This Directive was amended in 2001,⁵⁴ which had the objective of incorporating the 40 recommendations of the FATF, with further amendments made in 2006⁵⁵ that simplified customer due diligence in the money laundering process.⁵⁶ Virtual and digital currencies such as Bitcoin are not seen as electronic money under the Electronic Money Directive discussed above. However, the EU submitted that virtual and digital currencies, as a payment method, may be included in the Directive as a means by which money laundering activities are funded in Europe.⁵⁷

An example of how virtual and digital currencies like Bitcoin are used as a means to fund money laundering and terrorist financing activities was the November 2015 terrorist attacks in Paris (in which more than 100 people were killed in St Denis, Paris), which affected the EU greatly and emphasised the need for regulation in the area of money laundering and terrorist financing, especially when dealing with Bitcoin.⁵⁸ This thesis argues that many terrorist groups make use of virtual and digital currencies such as Bitcoin to finance their illegal activities and the current Anti-Money Laundering Directive⁵⁹ suggests a way towards cutting off the source of the funds to these terrorist groups is to 'strengthen controls of non-banking payment

⁵³Council Directive 91/308/EEC.

⁵⁴2001/97/EC.

⁵⁵2006/70/EC.

⁵⁶Anti-Money Laundering Forum, *Europe and Money Laundering* (2016) <<http://www.anti-moneylaundering.org/Europe.aspx>>. See also European Commission, *Financial Crime* (2016) Department of Justice <http://ec.europa.eu/justice/civil/financial-crime/index_en.htm>.

⁵⁷Bitcoin Magazine, European Commission Plans Crackdown on Bitcoin: New Regulations by June (25 February 2016) Nasdaq <<http://www.nasdaq.com/article/european-commission-plans-crackdown-on-bitcoin-new-regulations-by-june-cm584995>>.

⁵⁸See also Luke Parker, *European Union Seeking to Ban Bitcoin in Aftermath of the Paris Terrorist Attacks* (21 November 2015) Bitcoin.com <<https://news.bitcoin.com/european-union-seeking-ban-bitcoin-aftermath-paris-terrorist-attacks/>>.

⁵⁹Directive (EU) 2015/849.

methods such as electronic/anonymous payments and virtual currencies and transfers of gold, precious metals, by pre-paid cards'.⁶⁰

Another example is where ten people were arrested in the Netherlands for money laundering activities using Bitcoin transactions.⁶¹ The Bitcoin transactions were all seized and the activities involved within the money laundering scheme ranged from cash to trading illicit drugs.⁶² This is a clear example of ongoing unmonitored transactions similar to the Silk Road and Liberty Reserve sites, which were used as money laundering platforms.

The action plan communicated by the EU in 2016 regarding the restriction of funds to terrorist groups who utilise virtual and digital currencies as a way to launder money, proposed that the European Commission needs to make amendments to the 2015 Directive and includes the following recommendation:⁶³

Virtual currency exchange platforms: There is a risk that virtual currency transfers may be used by terrorist organisations to conceal transfers, as transactions with virtual currencies are recorded, but there is no reporting mechanism equivalent to that found in the mainstream banking system to identify suspicious activity. Virtual currencies are currently not regulated at EU level. As a first step the Commission will propose to bring anonymous currency exchanges under the control of competent authorities by extending the scope of the AMLD to include virtual currency exchange platforms, and have them supervised under Anti-Money Laundering/countering terrorist financing legislation at national level. In addition, applying the licensing and supervision rules of the Payment Services Directive (PSD) to virtual currency exchange platforms would promote a better control and understanding of the market. The Commission will examine this option further. The Commission will also examine whether to include virtual currency 'wallet providers'.

⁶⁰European Commission (EC), Communication from the Commission to the European Parliament and the Council on an Action Plan for Strengthening the Fight against Terrorist Financing, Brussels, COM (2016) 50/2, 10.

⁶¹'Ten Arrested in Netherlands over Bitcoin Money-laundering Allegations', *The Guardian* (online), 21 January 2016 <<https://www.theguardian.com/technology/2016/jan/20/bitcoin-netherlands-arrests-cars-cash-ecstasy>>.

⁶²Ibid.

⁶³European Commission, above n 60, 5.

This Action Plan by the EU to circumvent the use of Bitcoin for purposes of money laundering and terrorist financing is a step in the right direction to regulating money laundering activities on some level. The EU is working together with FATF in combating money laundering and terrorist financing activities in order to prevent any further incident such as the Paris attacks.⁶⁴

The EU had no plans to implement any form of legislation regarding the use of Bitcoin for money laundering purposes.⁶⁵ However, the attacks on Paris indicated a need to look at uniform laws to combat money laundering and terrorist financing. In turn, this resulted in the EU implementing an Action Plan.⁶⁶ Even though there is some action put in place by the EU regarding the treatment of money laundering transactions utilised by Bitcoins, the EU has been silent on the introduction of any laws regarding tax and Bitcoin transactions. The following section will consider the EU's position on tax evasion.

4.3.1.3 Tax Regulation

Even though the EU has not yet established a framework for countering the use of Bitcoin for money laundering purposes, a 2015 court case has put into perspective how tax will likely be treated within a Bitcoin transaction. In order to understand the tax implications on Bitcoin transactions, this section will briefly explain the tax regulation of Bitcoin transactions in the EU and whether there are new tax regulations for Bitcoin in place.

In January 2015, the EU implemented new Value Added Tax ('VAT')⁶⁷ laws.⁶⁸ These laws require companies to verify and record their customers' country of

⁶⁴See also Jeff Zalesin, *EU Says Money Laundering Law Should Cover Virtual Currency* (2 February 2016) Law360 <<http://www.law360.com/articles/754259/eu-says-money-laundering-law-should-cover-virtual-currency>>.

⁶⁵Stan Higgins, *European Commission to Assess Bitcoin's Role in Terrorist Financing* (17 November 2015) Coindesk <<http://www.coindesk.com/european-commission-to-assess-bitcoins-role-in-terrorist-financing/>>.

⁶⁶Ibid.

⁶⁷This is a similar term to Australian GST. The EU explains VAT as 'broadly based consumption tax assessed on the value added to goods and services. It applies more or less to all goods and services that are bought and sold for use or consumption in the Community. Thus, goods which are sold for export or services which are sold to customers abroad are normally not subject to VAT' – European

residence when selling electronic goods, in order to prevent tax evasion.⁶⁹ Another reason for introducing these new VAT laws is to provide a ‘level playing field’ between EU states.⁷⁰ As a result of newly developed laws on tax, Bitcoin users have to identify themselves when doing business with any company in the EU as it is seen as an online service provided to users of Bitcoin.

Accordingly, on 22 October 2015, the European Court of Justice (‘ECJ’) dealt with the issue of tax implications, in particular VAT, on Bitcoin. In the case of *Skatteverket v David Hedqvist*,⁷¹ Mr Hedqvist intended to provide services to Bitcoin users where the company exchanged real currency for virtual and digital currencies online.⁷² Therefore, the purpose of this business was to buy Bitcoins from private individual users and resell the Bitcoins to other users and companies who made use of their website to purchase Bitcoins with traditional currencies.⁷³ Prior to this start-up company, Mr Hedqvist asked the Swedish Revenue Law Commission about whether VAT must be paid in regards to the online selling of virtual and digital currencies such as Bitcoin.⁷⁴

It was determined that the above-mentioned decision was based on the interpretation of arts 2(1) and 135(1) of the Council Directive⁷⁵ relating to VAT. Article 2(1) relates to the supply of services and states:⁷⁶

- (1) The following transactions shall be subject to VAT:
 - (a) the supply of goods for consideration within the territory of a Member State by a taxable person acting as such;

...

Union, *What is VAT?* (2015) Taxation and Customs Union <http://ec.europa.eu/taxation_customs/taxation/vat/how_vat_works/index_en.htm>.

⁶⁸Aaron van Wirdum, *New EU Legislation on VAT Could Be Bad News for Bitcoin* (February 2015) Coindesk <<http://www.coindesk.com/new-eu-legislation-vat-bad-news-bitcoin/>>.

⁶⁹Ibid.

⁷⁰Adrian Houston and Geraint Lewis, *VAT on Electronically provided Services* (2014) Kingston Smith <<http://www.kingstonsmith.co.uk/upload/pdf/VAT%20flyer%20-%20FINAL.pdf>>.

⁷¹C-264/14 (22 October 2015).

⁷²Ibid [10].

⁷³Ibid [13].

⁷⁴Ibid [15].

⁷⁵2006/112/EC.

⁷⁶Ibid.

- (c) the supply of services for consideration within the territory of a Member State by a taxable person acting as such.⁷⁷

Additionally, art 135(1) relates to any exemptions on VAT and states:⁷⁸

- (1) Member States shall exempt the following transactions:

...

- (d) transactions, including negotiation, concerning deposit and current accounts, payments, transfers, debts, cheques and other negotiable instruments, but excluding debt collection;
- (e) transactions, including negotiation, concerning currency, bank notes and coins used as legal tender, with the exception of collectors' items, that is to say, gold, silver or other metal coins or bank notes which are not normally used as legal tender or coins of numismatic interest;
- (f) transactions, including negotiation but not management or safekeeping, in shares, interests in companies or associations, debentures and other securities, but excluding documents establishing title to goods, and the rights or securities referred to in Article 15(2).⁷⁹

The Swedish Revenue Law Commission came to the conclusion that 'Mr Hedqvist would be supplying an exchange service effected for consideration. The Revenue Law Commission held, however, that the exchange service was covered by the exemption under Chapter 3, Paragraph 9, of the Law on VAT' and therefore 'the term must be taken to mean that it relates only to bank notes and coins and not to virtual currencies'.⁸⁰ Therefore, the exchange of Bitcoins within a company is not subject to any VAT under EU law.

⁷⁷Council Directive ss 14(1) and 24(1) refers firstly to 'goods' as 'the transfer of the right to dispose of tangible property as owner' and secondly to 'services' as 'any transaction which does not constitute a supply of goods.'

⁷⁸Van Wirdum, above n 68.

⁷⁹*Skatteverket v David Hedqvist*, [6].

⁸⁰*Ibid* [16] – [17]. This decision was based on inferences made to the case of *First National Bank of Chicago* (C-172/96, EU:C:1998:354).

The ECJ held that in regards to arts 2(1) and 135(1) of the Council Directive, the supply of Bitcoin between a user and exchange platform is considered a service and will not be fall within the scope of the Council Directive.⁸¹ This indicates the current position in Sweden; however, the EU has not reached consensus on how Bitcoin is treated in different transactions for tax purposes in comparison to other countries such as the US, Canada and Australia where tax rulings have been issued to consumers and businesses.

4.3.1.4 Concluding Remarks

The EU's approach to the regulation of money laundering within Bitcoin transactions is still a developing area of law as the EU does not recognise Bitcoin as a financial product or legal tender. The EU argues that money laundering and Bitcoin is not a great concern at the moment. However, the EU has adopted a wait-and-see approach to the regulation of tax within Bitcoin transactions after a case was handed down regarding the use of Bitcoin. This suggests that the EU has different views on the regulation and use of Bitcoin than the US and Canada discussed below. The EU's wait-and-see approach on the regulation of tax is in its developing stage and is a positive contribution towards tax treatment within virtual and digital currencies such as Bitcoin.

4.3.2 *United States of America*

This part will consider the position of the US on the regulation of Bitcoin, specifically on whether Bitcoin is recognised legal tender, money laundering activities and taxation issues regarding the use of Bitcoin as a payment system. With the implementation of Bitcoin specific laws, this part will consider relevant legislation and case law on decisions regarding the regulation of Bitcoin and discuss whether the US considers Bitcoin as legal tender. The discussion of the US within the Bitcoin legal framework is central to understanding how countries implement Bitcoin specific regulation.

⁸¹Ibid [58].

4.3.2.1 Bitcoin as Legal Tender

As argued in Chapter 2, Bitcoin fulfils the functions of money; however, it is not recognised as legal tender in Australia. This is a similar position in the US. According to the *United States Constitution*, Congress is issued with authority ‘to coin money, regulate the value thereof, and of foreign Coin, and fix the standard of weights and measures’.⁸² Therefore, Congress has the power to create money at a federal level, but states are excluded and prohibited from doing this.⁸³ However, the *US Constitution* only prohibits states from coining money and not private individuals (or exchange platform merchants) who, for example, issue private virtual and digital currencies.⁸⁴ In contrast, the Supreme Court in *Mayor and Recorder of City of Nashville v Ray*⁸⁵ states that:⁸⁶

The making of [promissory notes, bills of exchange, and other commercial paper] was originally confined to merchants. But its great convenience was the means of extending its use, first to all individuals and afterwards to private corporations

Therefore, according to this case, it is possible for Bitcoin to be accepted as legal tender as a result of private users or private Bitcoin exchange platforms mining and selling Bitcoins.⁸⁷ However, with the development of laws in the US, individuals who create virtual and digital currencies such as Bitcoin are now in contravention with the *US Constitution* as they are not allowed to duplicate US currencies.⁸⁸ This is also apparent in the case of *United States v Van Auken*⁸⁹ where the Supreme Court held that legislation such as the *Stamp Payments Act*⁹⁰ was enacted in order to ‘prevent competition with the national currency’.⁹¹

⁸²18 U.S.C. art 1 § 8.

⁸³Grinberg, above n 31, 185.

⁸⁴Ibid 182-183.

⁸⁵(1873) 86 U.S. 468.

⁸⁶Ibid 476.

⁸⁷Stephan Small, ‘Bitcoin: The Napster of Currency’ (2015) 37 *Houston Journal of International Law* 581, 625.

⁸⁸*Criminal Code* 18 U.S.C. §§ 485 (1994).

⁸⁹96 U.S. 366 (1877).

⁹⁰18 U.S.C. §§ 485, 486 (1994).

⁹¹*United States v Van Auken*, [96].

Besides the *US Constitution* dealing with the creation of money, the *Stamp Payments Act*⁹² further states that any token issued for ‘a less sum than \$1, intended to circulate as money or to be received or used in lieu of lawful money of the United States’ is prohibited.⁹³ Grinberg further states that ‘the Act is unlikely to apply to anything that (1) circulates in a limited area, (2) is redeemable only in goods, [or] (3) does not resemble official U.S. currency and is otherwise unlikely to compete with small-denominations of U.S. currency’.⁹⁴ Accordingly, the US does not consider Bitcoin as legal tender or legal currency because of its decentralised nature.⁹⁵ Therefore, Bitcoin will not be able to fall within the scope of the *Stamp Payments Act* as enforcement will be difficult when trying to keep track of such a currency.⁹⁶ Furthermore, the *Stamp Payments Act* was amended in 1994 and had no intention of including digital currencies like Bitcoin within the ambit of the Act.⁹⁷ As a result, regulators will need to focus on regulation within different areas of law and whether legislation within those challenging areas is able to be improved in order to identify illegal activities within Bitcoin transactions.

4.3.2.2 Money Laundering

As is the case in the EU, Bitcoin is not considered legal tender, which also raises the issue of how Bitcoin will be regulated or monitored under US law in regards to money laundering. The primary legislation enacted by the US preventing money laundering is the *Bank Secrecy Act* (‘BSA’).⁹⁸ The BSA, also known as the *Currency and Foreign Transactions Reporting Act 1970*, ensures that institutions fulfil their reporting requirements in order to reduce money laundering.⁹⁹ These reporting duties will be discussed below; however, they includes that institutions and businesses should have in place KYC policies and report any suspicious transactions above

⁹²18 U.S.C. § 336 (2012).

⁹³Ibid.

⁹⁴Grinberg, above n 31, 185.

⁹⁵The *Uniform Commercial Code* (1952) may assist in determining how to deal with Bitcoin transactions under US law. See Nikolei Kaplanov, ‘Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation’ (2012) 25 *Loyola Consumer Law Review* 111, 137.

⁹⁶Matthew Kien-Meng Ly, ‘Coining Bitcoin’s “Legal Bits”’: Examining the Regulatory Framework for Bitcoin and Virtual Currencies’ (2014) 27(2) *Harvard Journal of Law and Technology* 588, 599.

⁹⁷Ibid.

⁹⁸31 U.S.C. §5312 (1970).

⁹⁹Shawn Turner, ‘U.S. Anti-Money Laundering Regulations: An Economic Approach to Cyber Laundering’ (2004) 54 *Case Western Reserve Law Review* 1389, 1402.

US\$10 000.¹⁰⁰ Further, the Financial Crimes Enforcement Network ('FinCEN') was created in order to keep track of the reporting of money laundering cases.¹⁰¹ With the increase in virtual currency use, FinCEN issued a guidance paper in 2013 on how the BSA should be applied to virtual currencies.¹⁰² The guidance paper acknowledges that virtual currencies such as Bitcoin will not be treated as a real currency or money under the BSA.¹⁰³ The guidance and amendment of current legislation to accommodate Bitcoin is a positive implementation of regulation regarding the use of Bitcoin; however, currently it only applies to businesses and not individuals. Therefore, private users will not fall within the ambit of the BSA and only businesses dealing with money, for example, Bitcoin exchange platforms, will be regulated for money laundering purposes.¹⁰⁴

Further legislation dealing with money laundering in the US is the *Money Laundering Control Act*.¹⁰⁵ The primary sections dealing with criminal money laundering are sections 1956 and 1957 of the Act.¹⁰⁶ Section 1956 of the Act deals with financial transactions and the unlawful proceeds of certain crimes¹⁰⁷ and s 1957 of the Act deals specifically with criminally derived property of more than \$10 000.¹⁰⁸ If the *Money Laundering Control Act* is applied to virtual currencies such as Bitcoin, it will be easier to prove and prosecute a person under s 1957 due to the element of intent not having to be proved.¹⁰⁹

According to the BSA and the *Money Laundering Control Act*, financial institutions fall within the legislation, but most Bitcoin transactions are made outside these institutions.¹¹⁰ Therefore, apart from ss 1956 and 1957 dealing specifically with money transactions, money launderers can be prosecuted under s 1960 as an

¹⁰⁰Ibid. See also Internal Revenue Code, *Money Laundering* (9 December 2016) <<https://www.irs.gov/uac/federal-statutes-money-laundering>>.

¹⁰¹FinCEN, *Overview* (2013) <https://www.FinCEN.gov/law_enforcement/>.

¹⁰²FinCEN, *Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies*, FIN-2013-G001 (2013) <<http://perma.cc/8G88-U6QT>>.

¹⁰³Ibid 1.

¹⁰⁴31 U.S.C. §5313 (1970).

¹⁰⁵*Money Laundering Control Act* 1986, Pub. L. No. 99-579, 100 Stat. 3207-18 to -21.

¹⁰⁶Jonathan Lane, 'Bitcoin, Silk Road, and the Need for a New Approach to Virtual Currency Regulation' (2014) 8 *Charleston Law Review* 511.

¹⁰⁷18 U.S.C. § 1956(a)(1) (2006).

¹⁰⁸18 U.S.C. § 1957(a). See also *United States v Flores*, 454 F.3d 149, 155 (3d Cir. 2006).

¹⁰⁹Danton Bryans, 'Bitcoin and Money Laundering: Mining for an Effective Solution' (2014) 89 *Indiana Law Journal* 441, 460.

¹¹⁰Ibid 461.

unlicensed money transmitting business.¹¹¹ When dealing with Bitcoin, it will most certainly fall under this section as it is an unlicensed money transmitting business, and even though issues can arise within this section it is the most suitable way of tracking suspicious transactions.¹¹²

This was illustrated in the case of *Security Exchange Commission v Trendon T Shavers and Bitcoin Savings and Trust* ('Shavers').¹¹³ The defendant in this case owned and operated a Bitcoin Savings Trust. This was an investment scheme where a great amount of money had been lost. The defendant was charged by the US Security Exchange Commission of running an illegal scheme that was in breach of the federal *Securities Act 1993* and *Exchange Act 1934*.

The defendant argued that Bitcoin is not money and therefore not a security and cannot be charged under the relevant laws.¹¹⁴ The US Security Exchange Commission argued that although money never exchanged hands, an investment contract existed, which is relevant under the US laws.¹¹⁵ An investment contract is defined as 'contract, transaction, or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of the promoter or a third party'.¹¹⁶ The court held that 'an electronic form of currency unbacked by a real asset and without specie, such as coin or precious metal' is seen as the characteristics of Bitcoin.¹¹⁷ The court further held that:¹¹⁸

It is clear that Bitcoin can be used as money. It can be used to purchase goods or services, and as *Shavers*¹¹⁹ stated, used to pay for individual living expenses. The only limitation of Bitcoin is that it is limited to those places that accept it as currency. However, it can also be exchanged for conventional currencies, such as the U.S dollar, Euro, Yen and Yuan. Therefore, Bitcoin is currency or a form of

¹¹¹18 U.S.C. § 1960.

¹¹²See for example *United States v Schnabel*, 939 F.2d 197, 203 (4th Cir. 1991).

¹¹³Case No. 4:13-CV-416.

¹¹⁴*Ibid* 2-3.

¹¹⁵*Ibid*.

¹¹⁶*Security Exchange Commission v W.J. Howey Co*, (1946) 328 U.S. 293, 298-99.

¹¹⁷*Security Exchange Commission v Trendon T Shavers and Bitcoin Savings and Trust* Case No. 4:13-CV-416, 3.

¹¹⁸*Ibid* 3.

¹¹⁹*Ibid*.

money, and investors wishing to invest in BTCST provided an investment of money.¹²⁰

The court came to this conclusion by explaining that because individuals can buy goods with Bitcoin, it can be converted into US money through a Bitcoin exchange platform, which makes it a financial product.¹²¹ However, this case focused on Bitcoin as a form of investment, which is highlighted by the court as a form of money. However, Bitcoin as a payment system, with legal tender status, is not a form of money. Therefore, regulation of Bitcoin when used as an investment and when used as a payment system should be clarified as this thesis argues that Bitcoin is not recognised as legal tender.

A valuable case dealing with Bitcoin as legal currency for money laundering purposes is the case of *State of Florida v Espinoza*.¹²² In 2014, two men were arrested in Florida for money laundering activities within Bitcoin transactions.¹²³ The defendants sold Bitcoins to undercover police agents and they were charged with two counts of money laundering under s 896.101 of the *Florida Money Laundering Act*.¹²⁴ However, one of the men, Michell Espinoza, is pursuing the case on the basis that Bitcoin is not classified as money and legal tender and therefore his illegal activities cannot be classified as money laundering.¹²⁵

Mr Palomino, Espinoza's attorney, indicated that 'it's just like you selling your own personal property ... Since bitcoins are "goods" his conduct is excluded from the

¹²⁰Ibid. See also David Rountree, 'Champing at the Bitcoin: Bitcoin, Regulators and the Law' (2013) 32(4) *Communications Law Bulletin*, 6.

¹²¹*Security Exchange Commission v Tredon T Shavers and Bitcoin Savings and Trust*, 2.

¹²²*State of Florida v Espinoza* Case No: F14-2923

<[http://www.miamiherald.com/latest-news/article91701087.ece/BINARY/Read%20the%20ruling%20\(.PDF\)>](http://www.miamiherald.com/latest-news/article91701087.ece/BINARY/Read%20the%20ruling%20(.PDF)>).

¹²³Ibid 2-3. See also Susannah Nesmith, *Miami Bitcoin Arrests May Be First State Prosecution* (February 2014) Bloomberg

<<http://www.bloomberg.com/news/articles/2014-02-09/miami-bitcoin-arrests-may-be-first-state-prosecution>>.

¹²⁴ *Florida Money Laundering Act*, Fla Stat § 896.101 (2016)

<http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=0800-0899/0896/0896.html>.

¹²⁵Ibid 3, 6. See also David Ovalle, 'Miami Man Arrested in Bitcoin Case Challenging Prosecution', *Miami Herald* (online), May 2016,

<<http://www.miamiherald.com/news/local/crime/article80277207.html>>.

definition of the term “money transmitter” under both state and federal law’.¹²⁶ The case against Michell Espinoza has been dismissed and Circuit Judge Poole held that:¹²⁷

This Court is unwilling to punish a man for selling his property to another, when his actions fall under a statute that is so vaguely written that even legal professionals have difficulty finding a singular meaning. *Without legislative action geared towards a much-needed update to the particular language within this statute*, this Court finds that there is insufficient evidence as a matter of law that this Defendant committed any of the crimes as charged, and is, therefore, compelled to grant Defendant’s Motion to Dismiss ...

From this case, it is clear that there is a real need for clear guidance on how to deal with Bitcoin as a payment system within money laundering legislation. This thesis also argues that rigorous regulation be put in place for money laundering activities within Bitcoin transactions that should specifically focus on Bitcoin exchange platforms, as this is the types of business that will be able to be monitored according to existing money laundering legislation.

The federal law in the US requires businesses that use Bitcoin as banking transactions to comply with the laws under the BSA and *Money Laundering Control Act*.¹²⁸ The approach taken by the US indicates a proactive engagement with regulation in combatting issues such as money laundering through Bitcoin transactions. There are conflicting views on whether Bitcoin is classified as a financial product for money laundering purposes. However, looking at the implementation of laws within the above-mentioned legislation, it is appropriate to prosecute criminals who are involved within money laundering activities using Bitcoin. It is imperative to recall that most reporting duties will be focused on businesses that deal with Bitcoin as a payment system and through this try and prosecute individuals on a federal level.

¹²⁶Lalita Clozel, *Is Bitcoin Money? Florida Judge to Decide* (June 2016) American Banker <<http://www.americanbanker.com/news/bank-technology/is-bitcoin-money-florida-judge-to-decide-1081739-1.html>>.

¹²⁷*State of Florida v Espinoza*, above n, 122, 7. (emphasis added)

¹²⁸Small, above n 87, 626. See also Catherine Christopher, ‘Why on Earth do People use Bitcoin?’ (2015) 2 *Business and Bankruptcy Law Journal* 1.

In the lead up to regulation of money laundering transactions through the use of Bitcoin, the US also specifically dealt with other issues such as the tax treatment within Bitcoin transactions through the adoption of guidance papers on this issue.¹²⁹ Because tax evasion within Bitcoin transactions is an existing and modern challenge faced by businesses and consumers, the following section will examine the treatment of tax and tax evasion activities through the guidance paper published by the Internal Revenue Services.

4.3.2.3 Tax Regulation

Apart from money laundering posing a significant issue for businesses and consumers when utilising Bitcoin, tax evasion is considered another key challenge with virtual and digital currencies (as discussed in Chapter 3). One of the reasons users of Bitcoin revert to these types of transactions is because it offers ‘an environment with ... no or only nominal taxation in which the activity is usually not subject to information exchange because, for example, of strict bank secrecy provisions’.¹³⁰ According to Omri, because Bitcoin has characteristics that make it attractive for criminals to use in order to evade tax, it is seen as a ‘super tax haven’.¹³¹ Bitcoin, as a digital currency, is attractive to users who want to evade tax because of its decentralised and anonymous characteristics. Therefore, it is difficult for a government or financial institution to intervene in any payments made by users or track their tax evasion activities. Mr Lessoff of the Internal Revenue Services (‘IRS’) noted that ‘the increasing use and misuse of cyber-based currency and payment systems to anonymously transfer illicit funds as well as hide unreported income from the IRS is a threat [the IRS is] vigorously responding to’.¹³²

A further report by the United States Government Accountability Office (‘GAO’) required the IRS to ‘find relatively low-cost ways to provide information to

¹²⁹Internal Revenue Service (IRS), *IRS Virtual Currency Guidance: Virtual Currency is Treated as Property for US Federal Tax Purposes* (2014) <<https://www.irs.gov/uac/Newsroom/IRS-Virtual-Currency-Guidance>>.

¹³⁰Omri Marian, ‘Are Cryptocurrencies Super Tax Havens?’ (2013) 38 *Michigan Law Review First Impressions* 112, 114.

¹³¹*Ibid* 116.

¹³²Kara Scannell, ‘US to Crack Down on Virtual Currency Tax Fraud’, *Financial Times* (online), June 2013 <<http://www.ft.com/intl/cms/s/0/5c7a453e-cf97-11e2-a050-00144feab7de.html#axzz4EaI5dHu0>>.

taxpayers, such as the web statement IRS developed on virtual economies, on the basic tax reporting requirements for transactions using virtual currencies developed and used outside virtual economies'.¹³³ Therefore, in 2014, the IRS issued a guidance paper on the treatment of tax in Bitcoin transactions.¹³⁴ However, commentators such as Hawley and Colangelo indicate that the current guidance paper issued by the IRS is not enough to assist businesses and consumers who use Bitcoin as a payment system and the regulatory compliance may seem problematic.¹³⁵

Therefore, Hampton argues that implementation of tax regulations on Bitcoin transactions will be suitable when the IRS has focused on three groups of individuals to whom tax regulations will apply:¹³⁶ firstly, the individuals who mine Bitcoins in order to generate an income;¹³⁷ secondly, investors who invest Bitcoin as stock or bonds; and lastly, those users or individuals who use it as medium of exchange in daily transactions.¹³⁸ The first two groups are dealt with by the guidance paper; however, the individuals who use Bitcoin to purchase goods are not given the same treatment.¹³⁹ The IRS currently treats virtual and digital currencies such as Bitcoin as property for tax purposes and not money.¹⁴⁰ The IRS therefore does not treat Bitcoin as foreign currency.¹⁴¹ According to Boris and Lokken, the current treatment of Bitcoin on tax will only broaden the tax principles already in place.¹⁴² Therefore, the IRS considers Bitcoin to operate similar to a barter transaction.¹⁴³ The guidance paper states that 'the IRS will apply the same general tax principles [that apply] to property transactions to transactions using virtual currency'.¹⁴⁴ This is similar in

¹³³United States Government Accountability Office, *IRS Guidance Could Reduce Tax Compliance Risks* (2013) GAO-13-506, 17 <<http://www.gao.gov/assets/660/654620.pdf>>.

¹³⁴IRS, above n 129.

¹³⁵Erin Hawley and Joseph Colangelo, 'Bitcoin Taxation: Recommendations to Improve the Understanding and Treatment of Virtual Currency' (2014) 15(2) *The Federalist Society for Law and Public Policy Studies* 4, 5.

¹³⁶Hampton, above n 37, 332-333.

¹³⁷*Ibid* 333.

¹³⁸*Ibid* 333-334. See also Nicole Mirjanich, 'Digital Money: Bitcoin's Financial and Tax Future Despite Regulatory Uncertainty' (2015) 64 *DePaul Law Review* 213.

¹³⁹*Ibid* 334.

¹⁴⁰IRS, above n 129.

¹⁴¹*Ibid*.

¹⁴²Boris Bittker and Lawrence Lokken, *Federal Taxation of Income, Estates and Gifts* (Warren Gorham & Lamont, 3rd ed, 1999) 41-43.

¹⁴³Martin McMahon and Lawrence Zelenak, *Federal Income Tax of Individuals* (2nd ed, 2014) 3.03.

¹⁴⁴IRS, above n 129.

Australia regarding Income Tax and other benefits.¹⁴⁵ According to Bal, ‘the creation of virtual money (mining), the receipt of virtual currency as a gift (or reward for some achievements within the game), the receipt of virtual currency in exchange for (real or virtual) goods and services and the sale of digital money for real currency’ can be seen as taxable income.¹⁴⁶

A convincing argument can be made that Bitcoin should be taxed as a capital asset under US law. Section 1221 of the *Internal Revenue Code*¹⁴⁷ (‘IRC’) defines a ‘capital asset’ as ‘property held by the taxpayer (whether or not connected with his trade or business)’ and therefore things that are used for personal investment.¹⁴⁸ In order to tax a capital asset, it is reliant upon the time the asset is cleared.¹⁴⁹ Therefore, if a capital asset, for example, Bitcoin, is sold within one year after it has been purchased, the profits made from the sale will be taxed as regular income.¹⁵⁰ If the capital asset is held for more than one year after it has been acquired, the profits will be taxed significantly lower as a capital gain.¹⁵¹ Therefore, whether the thing held by the individual is gaining or losing profits will depend on whether it is a capital asset.¹⁵² In light of this, virtual and digital currencies such as Bitcoin will need to fulfil the following requirements in order to comply with the IRS ruling:¹⁵³

- (i) what virtual and digital currency units were used;
- (ii) the source of these currency units and fair market value on the day it was purchased; and
- (iii) the fair market value on the day it was sold.

¹⁴⁵See discussion in Chapter 3.

¹⁴⁶Aleksandra Bal, ‘Stateless Virtual Money in the Tax System’ (2013) 53 *European Taxation* 351, 354.

¹⁴⁷26 U.S.C (2012).

¹⁴⁸[1] Wages paid to employees using virtual currency are taxable to the employee, must be reported by an employer on a Form W-2 and are subject to federal income tax; [2] payments using virtual currency made to independent contractors and other service providers are taxable and self-employment tax rules generally apply; [3] the character of gain or loss from the sale or exchange of virtual currency depends on whether the virtual currency is a capital asset in the hands of the taxpayer; and [4] a payment made using virtual currency is subject to information reporting to the same extent as any other payment made in property.

¹⁴⁹Small, above n 87, 634.

¹⁵⁰*Ibid.* See also Bryan Camp, ‘The Play’s the Thing: A Theory of Taxing Virtual Worlds’ (2007) 59 *Hastings Law Journal* 61, 62.

¹⁵¹*Ibid.*

¹⁵²IRS, above n 129.

¹⁵³Hampton, above n 37, 339.

These requirements are well-established within the IRC; however, it will create a barrier for every Bitcoin transaction within a commercial sense because of its retroactive applicability.¹⁵⁴ From the above mentioned, it is clear that Bitcoin, for tax purposes, is considered property and therefore, the IRC¹⁵⁵ states that an asset will be defined as ‘property held by the taxpayer, excluding such assets as property used in the taxpayer’s trade or business, certain forms of intellectual property, and other listed categories’.¹⁵⁶ In this case, Bitcoin transactions are taxed for Capital Gains Tax (‘CGT’) under the IRC.

Similar to Australia’s position and as discussed in Chapter 3, the US considers a Bitcoin transaction to be taxed in a similar way as a barter transaction. However, according to Hampton, the treatment of Bitcoin as a commodity and a barter transaction will fail because barter transactions and digital currencies have too many different features to be characterised as just a barter transaction.¹⁵⁷ Therefore, Bitcoin has various differences to barter transactions and regulation will fail, on policy grounds, as a commodity.¹⁵⁸ Hampton further explains that:¹⁵⁹

Both barter and other property transactions are comparatively inefficient systems that accommodate a clunky tax regime. The actual swapping of goods or services would presumably require direct contact, would not use a medium of exchange, and would therefore be relatively discrete and infrequent ... Virtual currency transactions are much more similar to other modern electronic payments systems, and the property rules do not accommodate the frequency and ease with which virtual currency can be used.

Although this is stated, consumers and businesses need to be aware that they will be taxed in the same way as with regular tax transactions according to the IRS.¹⁶⁰ This ruling by the IRS means that fewer transactions will be made using Bitcoin which, in

¹⁵⁴IRS, above n 130.

¹⁵⁵26 U.S.C (2012). See also Elizabeth Lambert, ‘The Internal Revenue Services and Bitcoin: A Taxing Relationship’ (2016) 35 *Virginia Tax Review* 88.

¹⁵⁶*Ibid* § 1221.

¹⁵⁷Hampton, above n 37, 340.

¹⁵⁸*Ibid*.

¹⁵⁹*Ibid* 341. See also Sergio Pareja, ‘It Taxes a Village: The Problem with Routinely Taxing Barter Transactions’ (2010) 59 *Catholic University Law Review* 785.

¹⁶⁰See Meghan Griffiths, ‘Virtual Currency Businesses: An Analysis of the Evolving Regulatory Landscape’ (2015) 16 *Texas Tech Administrative Law Journal* 303, 323.

return, means that Bitcoin can be regulated within businesses.¹⁶¹ Furthermore, Professor Graetz comments that ‘[a]s with domestic tax policy, the proper question is about the effects of international tax rules on the economic well-being, [and] welfare, of U.S. citizens and residents’.¹⁶² Therefore, economic efficiency is an integral part in how countries approach Bitcoin and the regulation of tax. Even though these tax rulings have been provided to the community, it is categorised within a ‘wait-and-see’ approach and therefore countries across the board need to focus at an international level on how tax evasion using Bitcoin needs to be dealt with.

4.3.2.4 Concluding Remarks

From the discussion above it is evident that the US accepts Bitcoin as a commodity and not legal tender when dealing with regulation of Bitcoin transactions. This is a key consideration because of the money laundering activities within Bitcoin transactions and regulation thereof and whether legislation can be amended or adopted to include Bitcoin transactions within the definition of ‘money’. The amendment of money laundering legislation by the US indicates their proactive approach to regulation of virtual and digital currencies such as Bitcoin. However, the US is yet to implement specific tax regulation and has only provided guidelines to consumers and businesses regarding the tax implications for using Bitcoin. Nevertheless, the US is making headway in regulatory reform for the use of Bitcoin. Both FinCEN and the IRS are looking to implement measures to regulate the use of Bitcoin as a payment system without it being recognised as legal tender.

4.3.3 Canada

This section considers the regulatory approach of Bitcoin as a payment system in Canada, specifically referring to money laundering and tax evasion issues, and whether Bitcoin is recognised as ‘money’ and hence legal tender. Canada has, like the US, passed laws in regard to virtual and digital currencies; however, Bitcoin, in this regard, is only regulated to a certain extent by these laws. The law passed is

¹⁶¹See also Richard Rubin and Carter Dougherty, *Bitcoin Is Property Not Currency in Tax System, IRS Says* (25 March 2014) Bloomberg <<http://www.bloomberg.com/news/articles/2014-03-25/bitcoin-is-property-not-currency-in-tax-system-irs-says>>.

¹⁶²Michael Graetz, ‘Taxing International Income: Inadequate Principles, Outdated Concepts, and Unsatisfactory Policies’ (2001) 26 *Brooklyn Journal of International Law* 1357, 1377.

specific to money laundering activities and there is currently no specific legislative framework for regulating tax and tax evasion activities involving Bitcoin.

4.3.3.1 Bitcoin as Legal Tender

As discussed in Chapter 2, it was argued that money is seen as an accepted form of medium of exchange and when accepted by governments it is accepted as legal tender and therefore a legal currency in that country. The issue with Bitcoin is that it is not backed by a government, which means it is not accepted as legal tender. However, it is still possible that Bitcoin fulfil the functions of money and can be identified as an alternative payment system.

The Bank of Canada defined ‘money’ as:¹⁶³

any asset that is widely accepted as a means of making payments or settling debts. Over the course of history, money has taken many forms. ‘Commodity’ money included cattle (related to the word “capital”), iron, gold, silver, diamonds and shells. Today, most money is in the form of bank notes, coins and deposits at banks and other financial institutions. Whether a tangible object or a computer entry (representing, for example, the value of a bank deposit), money is based on a social agreement to recognize value.

The Bank of Canada also noted that ‘money’ fulfils the functions of medium of exchange, unit of account and store of value.¹⁶⁴ In order for money to be seen as legal tender, the Supreme Court in *Reference re Alberta Statutes*¹⁶⁵ held that the term ‘money’:¹⁶⁶

is not necessarily legal tender. Any medium which by practice fulfils the function of money and which everybody will accept in payment of a debt is money in the ordinary sense of the words even although it may not be legal tender.

¹⁶³Bank of Canada, *What is Money?* (July 2012) Bank of Canada Backgrounders <http://www.bankofcanada.ca/wp-content/uploads/2010/11/what_is_money.pdf>.

¹⁶⁴*Ibid.*

¹⁶⁵[1938] SCR 100.

¹⁶⁶*Ibid* 116.

Therefore, money is seen as legal tender if it is accepted as a payment of debt from one person by another. Currently, the *Bank of Canada Act*¹⁶⁷ regulates the production of money as legal tender in Canada. Furthermore, the *Currency Act*¹⁶⁸ gives banknotes and coins legal currency status. In relation to Bitcoin being recognised as ‘money’ and legal currency, in 2014¹⁶⁹ Canada took the position that Bitcoin is another acceptable form of payment system¹⁷⁰ but that it is not a currency or legal tender.¹⁷¹ An official from the Canadian Finance Department stated that ‘only Canadian bank notes and coins are recognized as legal tender in Canada’.¹⁷² The Canadian Revenue Agency also stated that Bitcoin along with other virtual and digital currencies are not a legal currency and hence any transaction dealing with Bitcoins will be considered barter transactions.¹⁷³ The Canadian Revenue Agency classifies a barter transaction as ‘when any two persons agree to exchange goods or services and carry out that exchange without using legal currency’.¹⁷⁴ Therefore, the Canadian Revenue Agency has clearly distinguished Bitcoin from traditional currencies and is categorised as a commodity. This complicates Bitcoin as a payment system because of the legal issues it creates like money laundering and tax evasion activities.

4.3.3.2 Money Laundering

Although Canada, like the US, does not recognise Bitcoin as legal tender, it has passed legislation to deal with the use of Bitcoin in the area of money laundering. In

¹⁶⁷*Bank of Canada Act*, R.S.C 1985, c. B-2.

¹⁶⁸*Currency Act*, R.S.C 1985, c. C-52.

¹⁶⁹Prior to Canada implementing regulation on Bitcoin, Canada was classified as the ‘wild west’ simply because the Government refused to enact laws regarding virtual and digital currencies such as Bitcoin - Matthew Burgoyne, *Bitcoin: The World's Most Popular Virtual Currency* (20 February 2013) <http://www.mcleod-law.com/sites/default/files/pdfsMcLeod%20Law_News%20BulletinBitcoinSeptember%2022013.pdf>

¹⁷⁰See also James Dingle, *Planning an Evolution: The Story of the Canadian Payments Association, 1980-2002* (Bank of Canada, 2003) 42.

¹⁷¹David George-Cosh, ‘Canada Says Bitcoin Isn't Legal Tender’, *The Wall Street Journal* (online), 16 January 2014 <<http://blogs.wsj.com/canadarealtime/2014/01/16/canada-says-bitcoin-isnt-legal-tender/>>. An official of the Canada Finance Department stated that: ‘Only Canadian bank notes and coins are recognized as legal tender in Canada. Bitcoin digital ‘currency’ is not legal tender in Canada.’

¹⁷²David George-Cosh, ‘Canada Says Bitcoin Isn't Legal Tender’, *The Wall Street Journal* (online), 16 June 2014 <<http://blogs.wsj.com/canadarealtime/2014/01/16/canada-says-bitcoin-isnt-legal-tender/>>.

¹⁷³Canada Revenue Agency, *What You Should Know About Digital Currency* (5 November 2014) <<http://www.cra-arc.gc.ca/nwsrm/fctshts/2013/m11/fs131105-eng.html>>.

¹⁷⁴*Ibid.*

regards to the regulation of money laundering, the Canadian Government introduced regulation for money laundering activities within Bitcoin transactions.¹⁷⁵ The passing of this legislation came about through an ambiguity found in the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act (PCMLTFA)*.¹⁷⁶ According to this Act, ‘money’ was described as ‘currency of another country’ and as a result the Financial Transactions and Reports Analysis Centre of Canada (FINTRAC) determined that it cannot apply any restrictions on Bitcoin exchange platforms dealing with the trade of Bitcoin across the board.¹⁷⁷ This presented many businesses with the opportunity to accept Bitcoin as a means of exchange without the interference by FINTRAC or the Canadian Government.¹⁷⁸

However, this presented problems for FINTRAC and the Canadian Government because of Bitcoin money laundering activities. Therefore, in June 2014 the Canadian Government assented to Bill-C31 (Statutes of Canada 2014) that legislated Bitcoin transactions as a regime for anti-money laundering purposes. This Bill proposes that virtual and digital currency exchange platforms will be treated as ‘money service businesses’ for the purpose of money laundering.¹⁷⁹ It further requires that these money service businesses report to FINTRAC all activities and

¹⁷⁵Christine Duhaime, *Canada Implements World’s First National Bitcoin Law* (June 2014) <<http://www.antimoneylaunderinglaw.com/2014/06/canada-implements-worlds-first-national-bitcoin-law.html>>.

¹⁷⁶S.C. 2000, c. 17.

¹⁷⁷Due to a Loophole in Canadian Law, Bitcoin Businesses Aren’t Really Regulated (2013) Business in Canada

<<https://businessincanada.com/2013/10/28/due-to-a-loophole-in-canadian-law-bitcoin-businesses-arent-really-regulated/>>.

¹⁷⁸LuAnne LaSalle, ‘More Canadian Businesses Accepting Bitcoin’, *CTV News* (online), 26 January 2014 <<http://www.ctvnews.ca/business/more-canadian-businesses-accepting-bitcoin-1.1656423>>.

¹⁷⁹Ch 20 of the Bill, § 244.7(4)(a) and (b) which states the following: “‘money services business’ means an entity (a) that has a place of business in Canada and that is engaged in the business of providing at least one of the following services: (i) foreign exchange dealing, (ii) remitting funds or transmitting funds by any means or through any entity or electronic funds transfer network, (iii) issuing or redeeming money orders, traveller’s cheques or other similar negotiable instruments except for cheques payable to a named entity, (iv) dealing in virtual currencies, as defined by regulation, or (v) a prescribed service; or (b) that does not have a place of business in Canada, that is engaged in the business of providing at least one of the following services that is directed at entities in Canada, and that provides those services to their customers in Canada: (i) foreign exchange dealing, (ii) remitting funds or transmitting funds by any means or through any entity or electronic funds transfer network, (iii) issuing or redeeming money orders, traveller’s cheques or other similar negotiable instruments except for cheques payable to a named entity, (iv) dealing in virtual currencies, as defined by regulation, or (v) a prescribed service.’”

information of their users in order to limit money laundering activities. The Bill further states that:¹⁸⁰

Division 19 of Part 6 amends the Proceeds of Crime (Money Laundering) and Terrorist Financing Act to, among other things, enhance the client identification, record keeping and registration requirements for financial institutions and intermediaries, refer to online casinos, and extend the application of the Act to persons and entities that deal in virtual currencies and foreign money services businesses.

Under the Bill, reporting Bitcoin entities must be registered with FINTRAC, acquire information from their customers or clients, and report any suspicious transactions to FINTRAC as required by the PCMLTFA.¹⁸¹ Further to the proposed legislation, banks are prohibited from opening accounts and having a ‘correspondent banking relationship’ with businesses dealing in virtual currencies such as Bitcoin ‘unless that person or entity is registered with the Centre [FINTRAC]’.¹⁸² The introduction of the Bill by the Canadian Government is only the start in regulating virtual and digital currencies in Canada.¹⁸³

The passing of the above-mentioned legislation and information provided by FINTRAC suggest that Canada introduced a regulated framework on anti-money laundering activities. Therefore, Canada has been proactive in implementing legislation regarding anti-money laundering laws through requiring Bitcoin exchange platforms to fulfil certain reporting duties. It further requires these businesses (including users) to report to FINTRAC and lastly it prevents financial institutions from dealing with these businesses without the required licensing. With the discussion on regulation of money laundering, it is of importance to also look at how

¹⁸⁰Bill C-31 Pt 6 Div 19.

¹⁸¹See Pt 1 of the Act. The main purpose for this was to combat money laundering and terrorist financing within virtual and digital currency payments. A further concern is the fact that the Canadian Government introduced their own type of digital currency called ‘MintChip’ which is consumer friendly and which could be regulated accordingly within a detailed framework - David George-Cosh, ‘Canada Puts Halt to MintChip Plans; Could Sell Digital Currency Program’, *The Wall Street Journal* (online), 4 April 2014
<<http://blogs.wsj.com/canadarealtime/2014/04/04/canada-puts-halt-to-mintchip-plans-could-sell-digital-currency-program/>>.

¹⁸²Above n 180, § 258.

¹⁸³Ibid.

Canada is involved with the regulation of taxation when dealing with a Bitcoin transaction and what approach is taken in this regard.

4.3.3.3 Tax Regulation

With the increase in businesses using Bitcoin as a payment system, the Central Revenue Agency ('CRA') issued guidelines on the way Bitcoin transactions will be taxed. The guidelines stated that:¹⁸⁴

Where digital currency is used to pay for goods or services, the rules for barter transactions apply. A barter transaction occurs when any two persons agree to exchange goods or services and carry out that exchange without using legal currency. For example, paying for movies with digital currency is a barter transaction. The value of the movies purchased using digital currency must be included in the seller's income for tax purposes. The amount to be included would be the value of the movies in Canadian dollars.

Therefore, Bitcoin transactions will be treated as a commodity (similar to a barter transaction) and will be taxed accordingly in the same way.¹⁸⁵ The CRA notes in this regard that '[b]arter transaction rules apply where bitcoin are used to purchase goods or services'.¹⁸⁶ Further to the CRA's guidelines, consumers and businesses who use Bitcoins to buy goods or services, will be taxed in accordance with their income (in a similar way, again, to a barter transaction).¹⁸⁷ One requirement under this guideline is that consumers must keep a record of their purchases done with Bitcoin obtained through their digital wallet history.¹⁸⁸ One of the major challenges with Bitcoin transactions is determining the value of the Bitcoin at the time of purchase. The CRA received numerous recommendations on how to deal with this issue.¹⁸⁹ One recommendation was that the CRA publish a value on their site every day in order to

¹⁸⁴Canada Revenue Agency, above n 173.

¹⁸⁵A coffee shop in Vancouver was the first shop, in 2013, to have dealt with Bitcoins - Joon Ian Wong, *Bitcoin ATM Installations Surge in Canada* (19 January 2014) Coindesk <<http://www.coindesk.com/bitcoin-atm-installations-surge-canada/>>.

¹⁸⁶Robert Howse, 'Beyond the Countertrade Taboo: Why the WTO Should Take Another Look at Barter and Countertrade' (2010) 60 *Toronto Law Journal* 290, 290.

¹⁸⁷Canada Revenue Agency, above n 173.

¹⁸⁸Central Revenue Agency, *Barter and Bitcoin Transactions Can Result in Taxable Income and GST/HST*

Payable (20 June 2016) <<http://www.taxtips.ca/personaltax/barter.htm>>.

¹⁸⁹Small, above n 87, 620-621.

track the purchase price (in Canadian dollars) to the day the purchase was made.¹⁹⁰ This was suggested as a way to make the process more consumer-friendly.

In summary, the CRA treats tax on Bitcoin transactions as follows:

- (i) Bitcoin is considered a commodity and not a currency. Therefore, the traditional bartering rules will apply to Income Tax within bartering transactions.
- (ii) Bitcoin transactions are subject to GST and will be compared against the market value at the time of sale.
- (iii) Bitcoins can be traded as a commodity and will be taxed accordingly.¹⁹¹

In regard to the tax treatment on Bitcoin transactions, Canada appears to have adopted a ‘wait-and-see’ approach. Fournier and Lennard state that:¹⁹²

tax law is in a perpetual state of evolution as parliament works constantly to make the Canadian tax system more predictable, fair, and reflective of present-day economic realities. Thus, although the evolution of the legal framework is often largely based on case law, the tax framework in Canada evolves from a healthy mix of legislative intervention and judicial interpretation (which is sometimes even followed by legislative correction). The bitcoin system may not ultimately bring the revolutionary change that it seems to portend. Nonetheless, where there is money to be made, there is tax to be levied.

Therefore, even though Canada has been proactive in regulating Bitcoin transactions in some areas, they have not yet enacted specific laws dealing with the treatment of tax. The CRA has only provided guidelines to consumers and businesses regarding the treatment of tax on Bitcoin transactions; however, no specific legislation has been implemented.

¹⁹⁰Ibid. See also Sanya Samtani and Varun Baliga, ‘On Monopolistic Practices in Bitcoin: A Coded Solution’ (2015) 11 *Indian Journal of Law and Technology* 106.

¹⁹¹For a discussion on bartering rules in Canada, see *Westminster Bank Ltd v Osler* (1932) 17 TC 381 (HL); *The D’auteuil Lumber Co. Ltd v MNR* 70 DTC 6096 (Ex. Ct.); *A.S. Donovan v Canada* [1994] 1 CTC 2394 (TCC).

¹⁹²Olivier Fournier and John Lennard, ‘Rebooting Money: The Canadian Tax Treatment of Bitcoin and Other Cryptocurrencies’ (2014) 11 *Canadian Tax Foundation, Conference Report* 1, 23.

4.3.3.4 Concluding Remarks

Canada has passed legislation in regard to money laundering activities involving Bitcoin transactions through adopting a new money laundering Bill concerning virtual and digital currencies and the exchange of these currencies through Bitcoin exchange platforms. The steps taken by FINTRAC indicate their willing participation against money laundering activities. However, both Canada and the US are similar in regard to tax regulation within Bitcoin transactions. Canada has only introduced guidelines to businesses and consumers in regard to tax treatment of Bitcoin transactions and further regulation remains to be seen.

4.4 Key Points on Bitcoin Regulation in the United States, Canada and the European Union

There are different approaches to the regulation of Bitcoin by different countries within each legal issue; therefore, the level of regulation differs within each country. For the jurisdictions discussed above, namely the US, Canada and the EU, the legal issues and challenges to the regulation of Bitcoin transactions and approaches taken were discussed, specifically with regards to Bitcoin being recognised as legal tender, money laundering activities and the treatment of tax evasion activities.

Firstly, the US, Canada and the EU do not recognise virtual and digital currencies such as Bitcoin as legal tender. These countries refer to Bitcoin as a commodity that is subject to bartering rules and regulations. In Chapter 2 it was discussed that Bitcoin does fulfil the functions of ‘money’; however, it is not categorised as legal tender and hence legal currency. The US specifically treats Bitcoin as a commodity and Ly¹⁹³ notes that the *Uniform Commercial Code* (‘UCC’) assists in this interpretation.¹⁹⁴

If it were considered a currency, Bitcoin would be treated like a foreign currency under the UCC. Transactions involving foreign currencies are recognised. On the other hand, if Bitcoin were considered property, then transactions involving bitcoins in exchange for goods would be treated as barter transactions. In both cases, the UCC would recognise and validate transactions involving bitcoins.

¹⁹³Kien-Meng Ly, above n 96, 600.

¹⁹⁴Ibid.

Likewise, the CRA stated that Bitcoin is a barter system where ‘digital currency can also be bought or sold like a commodity’.¹⁹⁵ The legislation dealing with Bitcoin in Canada does not specifically provide a definition for virtual and digital currencies, but regulates it as a ‘money service business’ in order to deal with Bitcoin transactions as a commodity within a barter transaction.

In regard to the EU, Bitcoin is also not categorised as legal tender. The EBA stated that they see it as another payment system but not a legal currency. The EU also disregarded Bitcoin as e-money within their Directives and therefore will only consider it a commodity. Therefore, each country is regulating Bitcoin as a commodity and do not feel the need to include it in legislation as a legal currency.

Secondly, the issue on money laundering in the US, Canada and the EU was examined. Each country has an agency that deals with money laundering issues and now specifically money laundering issues regarding the use of Bitcoin; these agencies include FinCEN, FINTRAC and Moneyval respectively. These agencies ensure that Bitcoin transactions are monitored and assessed in compliance with the principles of international standards in order to counter money laundering as well as terrorism financing.

In the US, the legislation deals specifically with the fact that when Bitcoin is used for money laundering purposes, that it can be seen as an offence. Even though Bitcoin is not treated as money or legal tender, it is still considered a commodity and will be treated as such. However, money laundering laws are only limited to money transmitting businesses that keep track of suspicious transactions. Even though there is a proactive involvement of Bitcoin regulation in the US, it is still difficult to keep track of all suspicious transactions unless the business is a money transmitting business. Nevertheless, legislation has been implemented through amending current legislation in regard to Bitcoin transactions being used for money laundering purposes, which indicates a step forward in regulating Bitcoin.

¹⁹⁵Canada Revenue Agency, above n 173.

Canada was the first country to regulate virtual and digital currencies within newly created legislation in regard to money laundering. The current legislation in Canada dealing with money laundering is the PCMLTFA, but in 2014 the Canadian Government presented a new Bill that deals with the ambiguity of money laundering activities by businesses in order to track suspicious transactions when making use of Bitcoin as a payment method. These amendments to Canada's money laundering legislation, in respect of Bitcoin transactions, are a step in the right direction. The implementation of these regulations, in conjunction with guidelines published by FINTRAC, indicates the prospects of working towards substantial restructuring of the law in the area of money laundering.

Both the US and Canadian Governments opted to regulate money laundering laws either within existing legislation or through creating new legislation to deal with illicit activities faced by Bitcoin transactions. However, both have similar wait-and-see approaches to tax regulation and only considered tax within guidelines and not legislation itself. These guidelines only provide consumers and businesses with the current rules surrounding tax evasion and that it is considered a commodity rather than legal tender.

In relation to the regulation of money laundering activities within Bitcoin transactions in the EU, it was noted that virtual and digital currencies like Bitcoin are being used to increase money laundering and terrorist financing activities. However, the EU is not actively implementing laws regulating money laundering activities within Bitcoin transactions and hence falls within the wait-and-see approach. This is different from the approaches in the US and Canada as the need for the use of Bitcoin as legal tender and as 'money' for money laundering purposes is not imperative at the moment.

With regards to Bitcoin and tax evasion under US law, the IRS published guidelines on the regulation of virtual and digital currencies such as Bitcoin. The current position is that Bitcoin, for tax purposes, is viewed as property and not a currency.¹⁹⁶ There is no existing legislation on the treatment of tax in regard to Bitcoin; however,

¹⁹⁶See Chapter 2 for a comparison with the Australian tax treatment.

the published guidelines by the IRS is a step in the right direction towards gaining clarity on this area and what businesses can do in order to remain within the ambit of these guidelines.¹⁹⁷

With regards to the tax treatment on Bitcoin transactions in Canada, the CRA published a guideline on how tax on Bitcoin transactions should be treated and stated that it will be treated as a commodity for taxation purposes. The CRA contends that a person using Bitcoin to purchase goods or services will be taxed as part of their income and similar to a barter transaction.¹⁹⁸ The guidelines issued to consumers and businesses regarding the taxation of Bitcoin transactions are a step forward in providing clarity surrounding these taxation issues. However, the stringent regulations placed on Bitcoin transactions will make it burdensome for consumers and businesses to comply with tax regulations.

Similar to the US and Canada, the EU introduced some guidelines on the treatment of tax within Bitcoin transactions, indicating a wait-and-see approach. The guidelines are not as developed as those in Canada and the US; however, the EU is making headway in this area. This is evident through Sweden's first case on Bitcoin and tax, which ruled that Bitcoin is not applicable to tax. Therefore, this provides the EU with a precedent on how to approach possible regulation of Bitcoin in future.

From the discussion on regulations in different jurisdictions, it is evident that countries have different approaches and levels of regulation regarding virtual and digital currencies. Money laundering laws within Canada and the US have been incorporated within legislation whereas tax regulation is still being examined for possible future implementation of legislation. Despite this, the regulation of Bitcoin is seemingly ad hoc and evolving. Having examined the laws and regulations in the US, Canada and the EU regarding virtual and digital currencies, in particular Bitcoin, the next section will focus on the Australian context.

¹⁹⁷Kevin Tu and Michael Meredith, 'Rethinking Virtual Currency Regulation in the Bitcoin Age' (2015) 90 *Washington Law Review* 271, 310.

¹⁹⁸Canada Revenue Agency, above n 173.

4.5 Towards a Regulatory Framework for Bitcoin in Australia

As discussed in this chapter as well as in Chapter 2, it is difficult to regulate Bitcoin because of its anonymous, decentralised and private nature. As a decentralised system, there is no one institution that regulates Bitcoin and this makes it difficult for governments to regulate it appropriately.¹⁹⁹ Furthermore, the Bitcoin system can be accessed from any country and unless there is some unanimity amongst countries it will be difficult to control and regulate this payment system.²⁰⁰

In addition to the regulatory approaches discussed above, a *Submission* made to the Senate by Professor Stewart and Mr Emery at the Australian National University indicates that there are four approaches Australia can take when looking into the regulation of virtual and digital currencies.²⁰¹

The first approach deals with the government banning digital currencies and therefore not regulating tax on Bitcoin transactions. Banning virtual and digital currencies such as Bitcoin will only ‘increase the cost of enforcement in the long run’²⁰² and increase the extent of illegal activities in Australia, whether through money laundering or tax evasion. The aim of some level of regulation for virtual and digital currencies in Australia is to embrace the benefits and innovation Bitcoin conveys to consumers and businesses.

The second approach is dependent on rules that may regulate virtual and digital currencies. These rules apply to financial and banking regulation. However, banking and finance rules will not apply to current virtual and digital currencies such as Bitcoin because of Bitcoin’s distinctive characteristics.²⁰³ The rules that will apply to

¹⁹⁹Evan Hewitt, ‘Bringing Continuity to Cryptocurrency: Commercial Law as a Guide to the Asset Categorization of Bitcoin’ (2016) 39 *Seattle University Law Review* 619, 623.

²⁰⁰See Matthew Elias, ‘Bitcoin: Tempering the Digital Ring of Gyges or Implausible Pecuniary Privacy’ (2013) <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1937769>.

²⁰¹Miranda Stewart and Joel Emery, *Submission 23 to the Senate Economics References Committee, Inquiry into Digital Currency*, November 2014, 5 <<http://www.aph.gov.au/DocumentStore.ashx?id=a5af9d8e-e98f-4f76-9e91-ddd503f38712&subId=301947>>.

²⁰²*Ibid.* See also Danton Bryans, ‘Bitcoin and Money Laundering: Mining for an Effective Solution’ (2014) 89 *Indiana Law Journal* 441, 472.

²⁰³*Ibid.* 6.

businesses and consumers will either be too restrictive or too wide to consider it appropriate regulation.²⁰⁴

The third approach applies to the regulation of virtual and digital currency users individually.²⁰⁵ This approach has been debated numerous times; however, Peter Swire argues that this approach would be unfeasible due to the vastness of technology globally.²⁰⁶ Even though this has been argued as an approach to regulate virtual and digital currencies, it will not be the correct approach to take to combat tax evasion by individuals and will be a difficult task to follow.²⁰⁷

Lastly, regulation of virtual and digital currencies can be applied directly to virtual and digital currency exchange companies.²⁰⁸ In order to regulate tax payments of virtual and digital currencies such as Bitcoin, it is argued that this approach will be best when applied to virtual and digital currency exchange companies because these companies must have in place some form of tax regulation, which must fulfil any reporting duties.²⁰⁹ However, the concern with regulating exchange platforms is that not all users tend to use a middle-man and therefore can go undetected for tax purposes. According to Stewart and Emery, one solution could be to monitor the users' internet service provider ('ISP'), which can lead to the user dealing in Bitcoin transactions.²¹⁰ They further argue that this can lead to a costly process and this situation would be better if intermediaries that are closely related to the virtual and digital currency industry are regulated.²¹¹

In light of the preceding discussion and the discussion in Chapter 3, the following section will focus more specifically on the regulation of Bitcoin in Australia and a

²⁰⁴See Terence Wong, 'Bitcoin Deconstructed: Part 2 – Real and Virtual Worlds' (2014) *Australian Banking and Finance Law Bulletin* 122, 124-6.

²⁰⁵Stewart and Emery, above n 201, 7.

²⁰⁶Peter Swire, 'Of Elephants, Mice, and Privacy: International Choice of Laws and the Internet' (1998) 32 *International Lawyer* 991, 991. See also Peter Swire, 'Elephants and Mice Revisited: Law and Choice of Law on the Internet' (2005) 153 *University of Pennsylvania Law Review* 1975, 1976.

²⁰⁷Stewart and Emery, above n 201, 7.

²⁰⁸*Ibid.*

²⁰⁹*Ibid.* See also Miranda Stewart, 'Transnational Tax Information Exchange Networks: Steps Towards a Globalized, Legitimate Tax Administration' (2012) 4(2) *World Tax Journal* 152.

²¹⁰*Ibid.* See Stephanie Johnson, 'A Many-Sided Coin: The Tax Implications of Bitcoin' (2014) *Tax Note International* 971.

²¹¹*Ibid.* See also *Roadshow Films Pty Ltd v iiNet Ltd (No 3)* [2010] FCA 24 [430] - [442].

regulatory framework that will address the ‘legal grey area’²¹² allowing for the beneficial use of Bitcoin and other virtual and digital currencies that will no doubt continue to evolve.

4.5.1 Regulation of Bitcoin as a Financial Product and Legal Tender

In regard to Bitcoin being used as a payment system, Chapter 2 considered and discussed the legal status of Bitcoin and showed that currently Bitcoin is not considered legal tender in Australia, although it does fulfil the functions of money. Therefore, it is recognised as a type of medium of exchange that can be exchanged through an exchange platform and be stored as investment, but not a legal currency such as the Australian dollar. As a result, there is a legal relationship lacking within a Bitcoin transaction because there is no bank–customer relationship within a Bitcoin transaction as there is in a traditional banking transaction.²¹³ In Chapter 3 it was further established that the Australian Taxation Office treats Bitcoin as a commodity and therefore subject to the legal consequences of a barter transaction. Therefore, Bitcoin, as an alternative payment system, remains unregulated and there is a need for regulation, to some extent, of Bitcoin as legal tender and a financial product.

In order for Bitcoin to be accepted as legal tender and a financial product within the banking industry and by the Australian Government, there needs to be regulation of these payment systems to some extent. Currently, Australia is in a wait-and-see approach regarding the regulation of Bitcoin transactions; however, numerous submissions have been made by different individuals and entities on whether regulations to control Bitcoin should be adopted, and the nature of such regulations. Dr Bollen, for one, stated that ‘a well-designed and proportionate legal and regulatory regime will support user confidence in, and therefore growth of, innovative payment systems such as virtual currencies’.²¹⁴ Furthermore, the Chamber of Digital Commerce also stated that ‘not all that is labelled as a

²¹²Grinberg, above n 31, 182.

²¹³Nicole Swartz, ‘Bursting the Bitcoin Bubble: The Case to Regulate Digital Currency as a Security or Commodity’ (2014) 17 *Tulane Journal of Technology and Intellectual Property* 319, 322. See also Chapter 3.

²¹⁴Rhys Bollen, Submission 46 to the Senate Economics References Committee, *Inquiry into Digital Currency*, December 2014, 37
<<http://www.aph.gov.au/DocumentStore.ashx?id=00e72056-ade9-4679-b2bc-6f55109ad8bd&subId=302552>>.

“currency” in fact functions as a currency. In particular, it is important that we avoid imposing onerous and commercially unproductive burdens on those who work with the protocol, developing and deploying applications, and who do not use cryptocurrencies as a medium of exchange’.²¹⁵

Similarly, the FSI released a report on the need for regulation of Bitcoin as a payment system in Australia and stated:²¹⁶

Whether new entrants should be brought within a regulatory perimeter depends on the nature and scale of the risk they present and who bears the risk. Government needs to strike a balance that allows the benefits of innovation to flow through the financial system, while maintaining stability ... Technological innovation has the potential to improve financial system efficiency. It is a powerful force for competition, driving the development of products that better meet consumer needs and improve access. Firms can harness technologies to improve risk management and other internal processes. Although innovation has many benefits, it may also bring risks. Government must manage these risks, while enabling the benefits of innovation to flow through the system.

Therefore, the Australian Government and the banking industry are in a position to apply a regulatory framework to Bitcoin being used as an alternative payment system as it has the benefits of assisting with the innovation of payment systems. However, it is submitted that regulation needs to be addressed within a self-regulatory framework by the RBA, which coincides with the current banking regime and consumer protection laws.

²¹⁵Chamber of Digital Commerce, Submission 37 to the Senate Economics References Committee, *Inquiry into Digital Currency*, December 2014, 2
<<http://www.aph.gov.au/DocumentStore.ashx?id=96cfc120-5f99-4994-8c48-e54b525d0ebf&subId=302125>>. In Submission 45 of the Senate Inquiry into Digital Currency, PayPal addressed the issue of businesses dealing in digital currencies and stated that: ‘While the currency itself should not be regulated, and transactions by individual users without the assistance of intermediaries should not be regulated, companies that provide a financial service for digital currency transmission, for issuance or sale of digital currency, or for exchange with other currencies such as the Australian Dollar, should be regulated in a manner similar to the existing regulations that apply to other payment services. Those regulations, however, should be adapted to recognise the specific details of how different digital currencies work, particularly ‘decentralised’ digital currencies that are not controlled by a specific issuer.’

²¹⁶Financial System Inquiry, *Regulation in a Digital Environment* (2014)
<<http://fsi.gov.au/publications/interim-report/09-technology/regulation-digital-environment/>>.

4.5.1.1 A Self-Regulatory Framework

One of the recommendations by the Bitcoin Association of Australia, which is the argument of this thesis, is that the regulation of virtual and digital currencies such as Bitcoin should be self-regulatory.²¹⁷ This self-regulatory framework will be suitable for the regulation of Bitcoin as a payment system and financial product within Bitcoin exchange platforms and businesses dealing with the trade of Bitcoins. This self-regulatory framework will be reliant on risks being lessened accordingly; barriers to entry be lowered, and making provision for changes in all sectors.²¹⁸

The RBA regulates the policies and payments system within Australia and its power is to depend on ‘industry and market-driven solutions’²¹⁹ under the *Payment Systems (Regulation) Act*.²²⁰ In this regard, the RBA, ASIC and ACCC are all bodies performing self-regulation. Therefore, it is well-known that the banking industry practices self-regulation and that it takes different forms in order to achieve success.²²¹ The *ePayments Code* is but one example of how self-regulation within the banking industry functions and the Australian Taskforce on Industry Self-Regulation found that:²²²

At the most interventionist end of the spectrum are industry self-regulatory schemes that basically mirror regulation in that they incorporate industry codes drafted like legislative provisions, mechanisms to ensure compliance by all industry participants, and redress mechanisms to resolve customer disputes.

²¹⁷Bitcoin Association of Australia, Submission 13 to the Senate Economics References Committee, *Inquiry into Digital Currency*, November 2014, 14

<<http://www.aph.gov.au/DocumentStore.ashx?id=1b3fa531-89a9-4f5e-9202-9e484a83d156&subId=301953>>.

²¹⁸*Ibid.*

²¹⁹Reserve Bank of Australia, Submission 19 to the Senate Economics References Committee, *Inquiry into Digital Currency*, November 2014, 9

<<http://www.aph.gov.au/DocumentStore.ashx?id=1879c1f2-85fb-40be-b72c-a0e86b147882&subId=301963>>.

²²⁰*Payment Systems (Regulation) Act 1998* (Cth). Further, ‘The foundational motivations for Bitcoin appear to have been largely ideological. The digital currency was expressly designed to avoid any centralised control (of either the money supply or the payment system) and to minimise the degree of trust that participants need to place in any third party’ – Robleh Ali, John Barrdear, Roger Clews and James Southgate. ‘The Economics of Digital Currencies’ (2014) 54(3) *Bank of England Quarterly Bulletin*, 285.

²²¹Ann Wardrop, ‘Co-regulation, Responsive Regulation and the Reform of Australia's Retail Electronic Payment Systems’ (2014) 30 *Law in Context* 197, 203.

²²²Australian Government, The Treasury, Taskforce on Industry Self-regulation, *Industry Self-regulation in Consumer Markets* (2000) 20
<https://archive.treasury.gov.au/documents/1131/PDF/final_report.pdf>.

This indicates that with the correct and applicable self-regulatory schemes such as the *ePayments Code*, compliance within technological developments can be addressed appropriately. Furthermore, Ayres and Braithwaite argue that the theory of self-regulation ‘bridge the abyss between deregulatory and pro-regulatory rhetoric’, which indicates this process balances between control and deregulation.²²³

According to Howell, the following benefits are taken into account when identifying self-regulation:²²⁴

- (i) a decrease in law-making and enforcement costs;
- (ii) the aptitude for regulating rules in a specific industry;
- (iii) the necessary skills obtained from industry to determine standards; and
- (iv) the capacity to take action when new technology emerges.²²⁵

These benefits indicate the role self-regulation plays especially in regard to technological changes. To this end, ASIC maintains that self-regulation, in the form of codes, will bring about consumer confidence and benefits within their industry.²²⁶ Therefore, codes such as the *ePayments Code*.²²⁷

can act as incubators for new legal approaches by testing out what does and does not work, refining and enhancing legal approaches, addressing activities not easily controlled through legislative techniques, helping define what constitutes legally acceptable conduct, assisting in addressing some of the weaknesses of laws, being incorporated into the terms of legal instruments, extending the reach of legislative techniques, stimulating ‘beyond legislative compliance’ behaviour, and enhancing the enforcement capabilities of governments.

²²³Ian Ayres and John Braithwaite, *Responsive Regulation: Transcending the Deregulation Debate* (Oxford University Press, 1992) 5.

²²⁴Nicola Howell, ‘Revisiting the Australian Code of Banking Practice: Is Self-Regulation Still Relevant for Improving Consumer Protection Standards?’ (2015) 38 *University of New South Wales Law Journal* 544, 549.

²²⁵*Ibid.* See also Gail Pearson, *Financial Services Law and Compliance in Australia* (Cambridge University Press, 2009) 15.

²²⁶Australian Securities and Investments Commission, *Regulatory Guide 183 -Approval of Financial Services Sector Codes of Conduct* (1 March 2013), reg 183.2.

²²⁷Kernaghan Webb, ‘Understanding the Voluntary Codes Phenomenon’ in Kernaghan Webb (ed), *Voluntary Codes: Private Governance, the Public Interest and Innovation* (Carleton Research Unit for Innovation, Science and Environment, 2004) 16.

Therefore, it is submitted that self-regulation codes have become more helpful and consumers and businesses are aware of this. A further support of self-regulation was shown by the FSI stating that ‘self-regulation is more successful in setting governance, customer service or technical standards that supplement the law, than in addressing sector-wide conduct issues’.²²⁸ This suggests that self-regulation plays a significant role in some areas, especially technology.

One way in which codes, through self-regulation, play an important part is that it makes provision for specific protections that are not covered in legislation such as the *Banking Act 1955* (Cth). More specifically, the Code of Banking Practice together with the *ePayments Code* was accepted in *Williams v Commonwealth Bank of Australia*²²⁹ as part of the bank–customer contract that amounted to a breach of the Code and contract.²³⁰ Similarly, in *Brighton v Australia and New Zealand Banking Group Ltd*,²³¹ the court accepted that the self-regulatory Code of Banking Practice was incorporated by reference.²³² Therefore, the Code of Banking Practice together with the *ePayments Code* play a significant role in the regulation of banking institutions and seem to improve technological advances within the banking industry.

Adopting a similar approach to the Code of Banking Practice and the *ePayments Code* as a self-regulatory regime in regard to virtual and digital currencies is an appropriate and useful start to the management of virtual and digital currencies by consumers and businesses.²³³ Support by the FSI indicates the potential self-regulatory measures can play in the development of a code fit for technological advances such as Bitcoin.

Virtual and digital currencies, at present and as previously mentioned, are not regulated by the RBA and therefore not considered legal tender. Casey even notes that ‘bitcoins are just an electronic abstraction. They can’t be used for anything else,

²²⁸Financial System Inquiry, *Financial System Inquiry Interim Report* (15 July 2014) 194 <<http://fsi.gov.au/2014/06/12/interim-report-release-date/>>.

²²⁹[2013] NSWSC 335.

²³⁰*Ibid* [39].

²³¹[2011] NSWSCA 152.

²³²*Ibid* [45].

²³³Howell, above n 224.

nor are they made of something that can be used for anything else'.²³⁴ However, consumers and businesses are using this as a form of payment that is generally accepted by other users. In this case, the RBA has an opportunity to consider whether Bitcoin can be respected as a payment system. In the event digital currencies raise public interest, the RBA will only consider it as a payment system under s 8 of the *Payment Systems (Regulation) Act*.²³⁵ If the RBA considers digital currencies to fall under s 8 of the Act and form part as a payment system, it has the power to 'designate' a system to regulate digital currencies as a payment system.²³⁶ At the same time, the RBA observes that there is no need for regulation of digital currencies because of its low use by consumers and low competition.²³⁷ Therefore, a self-regulatory regime will be a proactive step in the controlling and monitoring of Bitcoin transactions through Bitcoin exchange platforms.

This response by the RBA indicates that Australia has a wait-and-see approach to the regulation of virtual and digital currencies such as Bitcoin.²³⁸ In the same breath, Bitcoin is not considered legal tender in Australia and will therefore not interfere with any banking transactions in a negative way.²³⁹ However, this does not mean that regulation of virtual and digital currencies such as Bitcoin should be ignored.²⁴⁰ In

²³⁴Laura Davidson and Walter Block, 'Bitcoin, the Regression Theorem, and the Emergence of a New Medium of Exchange' (2015) 18(3) *The Quarterly Journal of Austrian Economics* 311, 329.

²³⁵A payment system under s 8 of the *Payment Systems (Regulation) Act* is 'a funds transfer system that facilitates the circulation of money, and includes any instruments and procedures that relate to the system.'

²³⁶Howell, above n 224.

²³⁷*Ibid.* As discussed in Chapter 2, Bitcoin fulfils a different function than gold, in its form as store of value due to it offering lower transaction costs. However, the supply of Bitcoin is restricted as it is declining through the popular use of it. Therefore, on the face of it, Bitcoin does not pose any threat to the financial system in Australia. In fact, it may play an efficient role in international transfers due to the high rates commercial banks are charging consumers and businesses.

²³⁸The Financial Action Task Force (FATF) has stated that: 'Virtual currency has the potential to improve payment efficiency and reduce transaction costs for payments and fund transfers. For example, Bitcoin functions as a global currency that can avoid exchange fees, is currently processed with lower fees/charges than traditional credit and debit cards, and may potentially provide benefit to existing online payment systems, like PayPal' – Financial Action Task Force, 'Virtual Currencies Key Definitions and Potential AML/CFT Risks' (June 2014) *FATF Report on Virtual Currencies*, 10.

²³⁹Robert Vong, Submission 4 to the Senate Economics References Committee, *Inquiry into Digital Currency*, November 2014, 8
<<http://www.aph.gov.au/DocumentStore.ashx?id=6b19bdef-f2a0-4d5a-8752-a7252981a2c4&subId=301718>>.

²⁴⁰*Ibid.* The submission by Robert Vong argues the following: (i) Bitcoin is not superior to cash, EFTPOS, electronic funds transfer, BPAY or perhaps debit card for applicable domestic transactions. It does not offer material cost savings, if any at all; (ii) Bitcoin is not suitable for real time purchases. Since verification blocks are only created every 10 minutes, it takes on average more than five minutes to verify any transaction once. Now, to prevent double spending, the recommendation is to wait for six verification blocks before finalising a purchase. This makes Bitcoin unsuitable for

order for businesses and consumers to feel confident in using Bitcoin as a payment method, the government, together with the RBA, should consider adopting a self-regulatory framework that deals with Bitcoin as a currency.

The Senate's final recommendation on the regulation of Bitcoin within the banking sector is currently as follows:²⁴¹

The committee recommends that the Australian government consider establishing a Digital Economy Taskforce to gather further information on the uses, opportunities and risks associated with digital currencies. This will enable regulators, such as the Reserve Bank of Australia and ASIC, to monitor and determine if and when it may be appropriate to regulate certain digital currency businesses. In the meantime, the committee supports ADCCA's continued development of a self-regulation model, in consultation with government agencies.

According to the Australian Digital Currency and Commerce Association ('ADCCA'), a self-regulated and voluntary model will be effective because it will achieve certainty, transparency, flexibility and efficiency. This thesis agrees with this submission. This will ensure 'that the level of regulation is proportionate to the objectives sought to be achieved, and not unduly onerous'.²⁴² However, the ADCCA did also agree with ASIC on implementing a similar code for Bitcoin transactions as the *ePayments Code*, which will provide consumers and businesses with clear terms and conditions of payments when dealing with Bitcoin transactions through Bitcoin exchange platforms.²⁴³ Furthermore, the inquiry into Blockchain technology by

everyday situations where cash, EFTPOS or debit card clearly outperform; and (iii) Bitcoin is reliant on technological amenities such as computers, mobile phones, special software and a live Internet connection. These requirements bring fragility into the system, making it unusable in many scenarios, especially outside the stability of a peaceful, modern and functional society. Without these features, Bitcoin assets may be easily lost or inaccessible

²⁴¹Ibid 51.

²⁴²Australian Digital Currency Commerce Association, Submission 15 to the Senate Economics References Committee, *Inquiry into Digital Currency*, August 2014, 6

<http://fsi.gov.au/files/2014/09/Australian_Digital_Currency_Commerce_Association.pdf>.

²⁴³Parliament of Australia, Senate, above n 25, 51.

Australian banks indicates the positive response to this technology and that it is one avenue the banking industry is willing to investigate.

4.5.1.2 Potential Risks for Consumers and Businesses using Bitcoin as a Financial Product

Although the financial sector has expressed its views on the regulation of virtual and digital currencies, one of the main issues relating to the regulation of Bitcoin is the risk Bitcoin transactions have for businesses and consumers. One of the main reasons for this is because of the fall of Mt. Gox, which resulted in businesses and consumers losing a significant amount of money.²⁴⁴ Accordingly, the *Australian Securities and Investment Commission Act (Cth)*²⁴⁵ and the *Australian Competition and Consumer Act (Cth)*²⁴⁶ provide that service providers must not make misleading representations to consumers or engage in unconscionable conduct. One comment was made to Senate that:²⁴⁷

Regulation and consumer protection should focus on education. Upon being approached by potential users, nodes of entry, e.g. online exchanges and ATMs, should be required to issue warnings about the risks involved in the digital currency space, including the potential for scams and financial loss and the irreversibility of transactions. This could be similar to the warnings that fund managers, brokerages and money transfer providers are required to issue for many of their products.

Equally, the Senate Committee added that ‘digital currency is currently covered by the consumer protection provisions under the *Competition and Consumer Act 2010* and considers that further research should be conducted before any change to this arrangement is made’.²⁴⁸ Therefore, it is possible to access consumer and business protection through the ACCC. Thus, the regulation of virtual and digital currencies is a key consideration for businesses and consumers who need protection when dealing with Bitcoin transactions as a payment system. Furthermore, the ASIC made a comment that it is possible for Bitcoin to be considered a ‘financial product’ but it is

²⁴⁴See Chapter 2 for the discussion on the fall of Mt. Gox.

²⁴⁵*Australian Securities and Investment Commission Act 2001 (Cth)*.

²⁴⁶*Australian Competition and Consumer Act 2010 (Cth)*.

²⁴⁷Parliament of Australia, above n 25, 42.

²⁴⁸*Ibid.*

not currently seen as one.²⁴⁹ An incident occurred earlier in April 2016 where an Australian exchange platform, Igot, was in the process of collapsing and numerous consumers were faced with the harsh reality that they would be losing their invested money in Bitcoin as a result of this collapse.²⁵⁰ The crux of this incident is that ASIC does not regard Bitcoin as a ‘financial product’ and after receiving multiple complaints from consumers who invested their money within this exchange platform and who could not access any of their funds as a result of the collapse, ASIC is powerless in taking this dispute to court.²⁵¹ This indicates that without the appropriate level of regulation on virtual and digital currencies such as Bitcoin, organisations such as ASIC and the ACCC are incapable of helping businesses and consumers.²⁵²

Despite the above mentioned, a *Submission* made by Dr Dermody, the Committee Secretary of the Senate Committee, held that: ‘the regulations for consumer protection ought not be a blanket rule smothering businesses that do not have custodial control of customer funds’.²⁵³ Therefore, a recommendation was made in this *Submission* that a ‘multi-signature’ function will provide the necessary protection to businesses and consumers when using Bitcoins to purchase goods or services.²⁵⁴

Referring back to the discussion on Bitcoin transactions in Chapter 2, transactions are done through a digital key and signature. In order to proceed with the transaction, the person needs the digital key and signature to make a payment. The recommendation made above is that multi-signatures should apply to Bitcoin

²⁴⁹Greg Medcraft, *Op-ed: Blockchain* (October 2015) Australian Securities and Investment Commission <<http://asic.gov.au/about-asic/media-centre/asic-responds/op-ed-blockchain/>>.

²⁵⁰Georgia Wilkins, ‘Bitcoin Faces Calls for Tougher Regulation amid Igot Scandal’, *The Sydney Morning Herald* (online), 12 April 2016 <<http://www.smh.com.au/business/banking-and-finance/bitcoin-faces-calls-for-tougher-regulation-amid-igot-scandal-20160412-go44xo.html>>.

²⁵¹*Ibid.*

²⁵²See also Jake Sturmer and Alison McClymont, ‘Igot: Bitcoin Investors ‘owed thousands of dollars’ by Struggling Australian Exchange’, *ABC News* (online), 11 April 2016 <<http://www.abc.net.au/news/2016-04-11/australian-bitcoin-exchange-igot-on-verge-of-collapse/7315894>>.

²⁵³Chris Mountford, Submission 40 to the Senate Economics References Committee, *Inquiry into Digital Currency*, December 2014, 4 <<http://www.aph.gov.au/DocumentStore.ashx?id=772948e4-4ab5-4484-9a6d-f881eb4d68de&subId=302131>>.

²⁵⁴*Ibid.* 5.

transactions, which would require more than one signature to be accepted.²⁵⁵ Similar multi-signature tools have, over the past couple of years, assisted financial institutions in assessing risks associated with credit card payments in monitoring transactions on a daily basis.²⁵⁶ However, unlike Bitcoin transactions, financial institutions have full access to the customer's transaction details and this is where financial institutions can provide help to those customers who use Bitcoin as a payment system by acting as a signatory while the customer still has full control over their account.²⁵⁷ The customer will therefore be provided with a multi-signature tool when making a payment.

The *Submission* further illustrates that 'customers would sign transactions with their main key only and the risk assessment service would respond by signing with their key – unless there seemed to be a problem. Just as credit card companies call customers to check suspicious transactions, so could they do this with Bitcoin'.²⁵⁸ This is one way of protecting consumers and businesses from theft and unauthorised use of Bitcoin funds, but the consumer or business will have to pay a fee in order to secure their funds with a multi-signature wallet. Against this background, it is relevant to distinguish between credit card payments and Bitcoin payments when using multi-signature functions and the consequences when using it. These include that customers do not have to pay for credit services that involve high rates; customers can choose which transactions to protect that does not allow for additional charges as with a credit card; customers who show poor credit will be able to get protection and benefit from risky transactions; competition between companies will be high as they can enter the market directly; and the privacy of customers will improve because of there being no credit risk checks and no vetting by these companies.²⁵⁹

²⁵⁵Ibid. See also Guilio Prisco, *Threshold Signatures: The New Standard for Wallet Security* (March 2015) Bitcoin Magazine <<https://bitcoinmagazine.com/articles/threshold-signatures-new-standard-wallet-security-1425937098>>.

²⁵⁶McConnell, above n 2, 6.

²⁵⁷Ibid. See also Christoph Marckx, *BitGo Creates Multi-Signature Bitcoin Wallet* (April 2014) Crypto Coin News <<https://www.cryptocoinsnews.com/bitgo-creates-multi-signature-bitcoin-wallet/>>.

²⁵⁸Mountford, above n 253, 7.

²⁵⁹Ibid 6-7. See also Richard Brown, *How Are Payments with Bitcoin Different than Credit Cards?* (January 2015) Coin Center <<https://coincenter.org/2015/01/payment-security/>>.

One other possible suggestion that supports the argument that some level of regulation of Bitcoin can be successful is the partly regulated Bitcoin currency in Japan. The approach taken by Japan in regulating consumer protection in regard to Bitcoin has shown not to be onerous on the Japanese Government and also provide sufficient protection to those consumers who use Bitcoin. Japan has introduced the Japan Authority of Digital Asset ('JADA'), an institution that provides standards and codes to the members of the public who make use of Bitcoin as a payment system.²⁶⁰ The Japanese Government is strongly supporting this institution as it does not require any legislative changes to any laws.²⁶¹ This institution provides guidelines to consumers regarding the use and risks of Bitcoin and also monitors businesses in order to prevent a similar situation to what happened with Mt. Gox.²⁶²

Even though JADA is limited to monitoring all businesses making use of Bitcoin, it is a positive step towards semi-regulation of Bitcoin. These types of institutions can be seen as a tool to help develop some kind of code and conduct for businesses on a national as well as international level. This ensures a level of protection for consumers and businesses against predicaments such as money laundering and tax evasion. Further, it will encourage awareness to consumers and businesses on a national and global level.

On the one hand, the above mentioned approaches are worth considering in order to regulate Bitcoin on some level; however, on the other hand, the Senate Committee indicated the need for regulatory protection for consumers and businesses, but that any overregulation of Bitcoin at this stage will raise some concerns.²⁶³ The Senate Committee held that 'the central concern was any regulatory framework should balance the need to mitigate risks facing consumers and the broader financial system, while still encouraging innovation and growth in the industry by keeping the barriers to entry low'.²⁶⁴

²⁶⁰Deepak Tiwar, *The Japan Authority of Digital Asset (JADA) to Establish Standards and Codes of Conduct* (2014) Forex Minute <<http://www.forexminute.com/bitcoin/the-japan-authority-of-digital-asset-jada-to-establish-standards-and-codes-of-conduct-38202>>.

²⁶¹Ibid.

²⁶²Ibid.

²⁶³Parliament of Australia, above n 25, 50.

²⁶⁴Ibid.

The approaches taken above to protecting banking institutions, businesses and consumers are ways forward to regulating Bitcoin to some extent and take advantage of the benefits Bitcoin has. However, with Australia adopting a wait-and-see approach, the regulation of Bitcoin may take longer than needed because of its unique characteristics and process of the network.

4.5.2 *Regulating Money Laundering Activities*

As mentioned in Chapter 3, one of the main legal issues faced by governments is the use of Bitcoin for money laundering purposes. Because of its anonymous and decentralised features, it is easy to understand how Bitcoin can be used as a vehicle to promote money laundering, not only in Australia, but internationally as well. One approach to monitoring Bitcoin systems in regards to money laundering is through Bitcoin exchange platforms in order to keep a record of account and client information on those systems.²⁶⁵ One example where this has been applied is in the US where FinCEN requires all exchange platforms to register as money transmitting businesses under the relevant law dealing with money laundering activities.²⁶⁶ Under the required legislation, Bitcoin exchanges as well as users who operate Bitcoins personally need to fulfil four requirements:²⁶⁷

- i) All exchange companies using Bitcoin are required to register with FinCEN.²⁶⁸
- ii) All exchange companies are required to report transactions, especially when suspicious.²⁶⁹
- iii) Implementation of money laundering procedures and policies within the company is fundamental and crucial to suspicious transaction reporting.²⁷⁰
- iv) All exchange companies must ask and keep record of client and transaction information at all times.²⁷¹

²⁶⁵Federal Bureau of Investigation, *Bitcoin Virtual Currency: Unique Features Present Distinct Challenges for Detering Illicit Activity* (May 2012) <http://www.wired.com/images_blogs/threatlevel/2012/05/Bitcoin-FBI.pdf>.

²⁶⁶FinCEN, above n 102.

²⁶⁷See discussion on the *Money Laundering Control Act* in Chapter 3.

²⁶⁸If the company is not registered, it will be seen as an unregistered money transmitter and in breach of FinCEN's regulations.

²⁶⁹For each deposit exceeding US\$10 000, the exchange company needs to report it to FinCEN.

²⁷⁰This is in order to track money laundering transactions on a daily basis.

The phase where reporting institutions such as FinCEN will identify money laundering transactions is where miners or users of Bitcoin convert illicit money on a Bitcoin exchange platform. Regulators will then be able to identify criminals accordingly.²⁷² However, in order to be successful with reporting duties in regard to money laundering processes, reporting duties of suspicious transactions within Bitcoin payments need to develop within a well-defined framework.

In Australia, the Senate Committee inquired into whether virtual and digital currencies such as Bitcoin should fall under the *Anti-Money Laundering and Counter Terrorism Financing Act*²⁷³ and be seen as a vehicle towards combatting money laundering through Bitcoin transactions.²⁷⁴ One challenge specified by the Attorney-General's Department is that there needs to be consensus on which virtual and digital currency businesses will fall under the regime of AML/CTF and what they need to comply with.²⁷⁵ It is therefore necessary for regulators to find a balance between the risks imposed to consumers and businesses as well as the development of Bitcoin.²⁷⁶

Further, AUSTRAC outlined the requirements virtual and digital currencies such as Bitcoin will have to comply with if included under the AML/CTF regime and states that:²⁷⁷

²⁷¹A list of names, addresses, numbers, birth date and passport numbers will be requested otherwise an account cannot be opened.

²⁷²FinCEN, above n, 102.

²⁷³*Anti-Money Laundering and Counter Terrorism Financing Act 2006* (Cth).

²⁷⁴The difficulty with this question is posed by the Attorney General's Department: 'While we might have some visibility of the on-ramps and off-ramps in the places where they intersect directly with the financial sector, short of having everybody who has a bitcoin and makes a transaction report to AUSTRAC, it is going to be very difficult to find a point where all those transactions are co-located in a way they can be reported. So that is a big challenge for us, because we are going to lose visibility of how these bitcoins move around once they are inside the bitcoin system. We can see people buying them, we can see people selling them to a large extent, but we lose visibility of what happens within the system' – Attorney General's Department, Submission 42 to the Senate Economics References Committee, *Inquiry into Digital Currency*, December 2014, 8

<<http://www.aph.gov.au/DocumentStore.ashx?id=4c7577b0-ef54-4d0b-b657-61f4d454a2b1&subId=302132>>.

²⁷⁵*Ibid* 13.

²⁷⁶Parliament of Australia, above n 25, 58. Further, AUSTRAC stated that 'obviously, the [statutory] review is the logical place to be looking at that and looking at what needs to be done.'

²⁷⁷Parliament of Australia, above n 25, 60.

The sort of obligations in our act then are for them to have an anti-money laundering and counter-terrorism financing program, which means that they need to assess the risks of money laundering for their customers and the types of transactions that they are dealing with. They have to have a program in place to mitigate those risks. They have to carry out know your customer procedures with their customers. They have to have ongoing due diligence programs around watching whether their customers risk is going up and down and whether they need to do more than they have done before. They need transaction monitoring systems so that they can report whatever equivalent – perhaps you would have an equivalent of \$10,000 digital currency. You might have a report about that and you might have a report where they were transmitting internationally, as we talked about. If they are going to transact in the same way as what we would call remittance providers transact, then there would seem to be at the moment – off the top of my head – no policy reason why you would not cover them in the same way. We would certainly want suspicious matter reporting.

Encapsulating the above mentioned regulatory approaches to Bitcoin in money laundering activities, regulation is needed in order to avoid any risks posed to consumers and businesses using Bitcoin as a payment system. The Australian Senate’s recommendation on the regulation of money laundering activities within Bitcoin transactions is:²⁷⁸

The committee recommends that the statutory review considers applying AML/CTF regulations to digital currency exchanges.

However, the regulation of money laundering activities in Bitcoin transactions, in order to protect consumers and businesses, will be limited to Bitcoin exchange platforms as the *AML/CTF Act* is not capable of regulating all Bitcoin transactions. A statutory review of the *AML/CTF* legislation will need to identify what are Bitcoin exchange platform businesses and the types of digital currencies that will apply under this Act. The expansion of the Act to include digital currencies like Bitcoin and Bitcoin exchange platforms will assist with the monitoring of money laundering activities within Bitcoin transactions.

²⁷⁸Ibid 62.

Within the AML/CTF legislation, it is imperative for businesses to understand who their customers are and the information they provide for payment purposes. Therefore, it is a requirement by this Act that businesses implement the necessary KYC policies to monitor the activities of their customers. However, as discussed in Chapter 3, Bitcoin transactions make it difficult for businesses to know their customers because of its private and anonymous characteristics. Therefore, this thesis argues that the AML/CTF legislation update the requirement of a KYC policy to apply to Bitcoin exchange platform businesses in order to control and monitor suspicious transactions and know the identity of their customers. One example of how the KYC policy was adopted to Bitcoin transactions, in a limited but still effective way, was the system used by Mt. Gox.²⁷⁹ Even though Mt. Gox collapsed because of the CEO accessing and taking all the money stored in Bitcoin, the system worked effectively with the verification and KYC policies they introduced into the system. Mt. Gox had three levels of account verification. Firstly, users could only manage their accounts with Bitcoin and no other virtual or digital currency, but there was no verification required yet at this level.²⁸⁰ Secondly, users who wanted to conduct their transactions through Mt. Gox needed to provide them with some kind of identification, which was in the form of an identification document or proof of residence. This then allowed the users to deposit or withdraw any currency within the Mt. Gox account.²⁸¹ Lastly, any companies or traders who used the Mt. Gox platform to withdraw larger amounts than the previous level, needed to provide Mt. Gox with certificates of incorporation as well as ID verification of shareholders.²⁸²

This is a helpful example of how Bitcoin exchange platforms can introduce verification and KYC policies into virtual and digital currency systems and assist in combatting money laundering. Therefore, a well-developed KYU policy will help with the monitoring and control of Bitcoin transactions, which is regulated by the

²⁷⁹Kelsey Penrose, 'Banking on Bitcoin: Applying Anti-money laundering and Money Transmitter Laws' (2014) 18 *North Carolina Banking Institute*.

²⁸⁰Ibid. Known as Level 0. See also Andy Greenberg, *Not So Anonymous: Bitcoin Exchange Mt. Gox Tightens Identity Requirement* (30 May 2013) *Forbes* <<http://www.forbes.com/sites/andygreenberg/2013/05/30/not-so-anonymous-bitcoin-exchange-mt-gox-tightens-identity-requirement/#3cbdd36a5e87>>.

²⁸¹Ibid. Known as Level 1.

²⁸²Ibid. Known as Level 2. See also Jeffrey Sparshott, 'Bitcoin Exchange Bolsters User Verification', *The Wall Street Journal* (online), May 2013 <<http://www.wsj.com/articles/SB10001424127887324866904578515552017379238>>.

AML/CTF legislation, and build stronger relationships with banking institutions and ensure greater consumer and business protection. Subsequent to regulation by AML/CTF legislation, AUSTRAC can create a committee to deal with these digital currencies specifically, similar to JADA, and monitor money laundering activities within Bitcoin exchange platforms and provide updated guidelines to consumers and businesses on the development of Bitcoin transactions and money laundering activities.

4.5.3 Taxation Regulation and Bitcoin

Key legal issues concerning taxation and Bitcoin in Australia were outlined in Chapter 3 followed by a discussion on the regulation of tax activities within Bitcoin transactions in the US, Canada and the EU. As noted above, besides the recognition that Bitcoin is likely to be taxed as a commodity as it is not legal tender, there has been very limited development in the area of tax regulation in these countries with regards to Bitcoin. Australia is no different; however, it is submitted that more needs to be done to provide clarity on whether Bitcoin should be regulated within the current tax regime and how to address issues of tax evasion within this regime more effectively.

The approach the ATO and Australian Government have taken regarding the taxation of virtual and digital currencies such as Bitcoin has been interesting. Regardless of the rulings published by the ATO, the need for regulation of tax within Bitcoin transactions can be two-fold. On the one hand, the Australian Government and the ATO are looking into tax being applied to Bitcoin transactions and how an effective regulatory structure can be implemented. In the same breath, the 2015 Senate Report on Digital Currencies stated that government accepted Bitcoin transactions should be taxed for GST purposes. However, on 22 March 2016, Treasurer Scott Morrison indicated that Bitcoin transactions will not be subject to GST²⁸³ because of companies pulling out of the Australian economy.²⁸⁴ The other rulings on tax still apply.

²⁸³Joel Emery, 'Decoding the Regulatory Enigma: How Australian Regulators Should Respond to the Tax Challenges presented by Bitcoin' (February 2016) *Tax and Transfer Policy Institute*, 11. In this article, Senate argued that 'the result of the tax treatment is already hindering Bitcoin adoption and

On the other hand, companies, small businesses and consumers do not want tax to be applied on daily and business transactions when using Bitcoin because of double tax applying²⁸⁵ as a result of the ATO recognising Bitcoin as a commodity and not a currency. Therefore, the double tax of Bitcoin transactions is a characteristic of barter transactions and the way commodities are taxed. Therefore, it is argued that ‘removing the double taxation of Bitcoin is required to support start-ups develop and capture a share of the emerging economic advantage of digital currency in this country’.²⁸⁶

The current framework for tax within Bitcoin transactions by the ATO, which was explained in Chapter 3, can be summarised as follows:²⁸⁷

- (i) GST: the GST implications of transactions involving Bitcoin.²⁸⁸
- (ii) Income Tax: is Bitcoin a ‘foreign currency’ for the purposes of Division 775 of the *Income Tax Assessment Act 1997*?²⁸⁹
- (iii) Income Tax: is Bitcoin a CGT asset for the purposes of subsection 108-5(1) of the *Income Tax Assessment Act 1997*?²⁹⁰
- (iv) For the purpose of FBT: is the provision of Bitcoin by an employer to an employee in respect of their employment a fringe benefit for the purposes of subsection 136(1) of the *Fringe Benefits Tax Assessment Act 1986*?²⁹¹

innovative start-ups in Australia, and has the potential to severely hinder the growth of the nascent FinTech space in Australia.’

²⁸⁴See also Sarah Kimmorley, ‘From Bitcoin, to Robo-advice, Crowdfunding and Regulatory Sandboxes: Scott Morrison’s Fintech Plan’, *Business Insider Australia* (online), March 2016 <<http://www.businessinsider.com.au/from-bitcoin-to-robo-advice-crowdfunding-and-regulatory-sandboxes-scott-morrison-fintech-plan-explained-2016-3>>.

²⁸⁵Matthew Cridland, *Australia: GST and Bitcoin – Potential Pitfalls* (March 2014) DLA Piper Australia <<http://www.mondaq.com/australia/x/300182/sales+taxes+VAT+GST/GST+and+Bitcoin+potential+pitfalls>>.

²⁸⁶Parliament of Australia, above n 25, 29.

²⁸⁷Australian Taxation Office, Submission 8 to the Senate Economics References Committee, *Inquiry into Digital Currency*, November 2014, 3

<<http://www.aph.gov.au/DocumentStore.ashx?id=4e646878-bca5-4c7e-9c77-dd20bd243e03&subId=301948>>.

²⁸⁸GSTR 2014/D3.

²⁸⁹TD 2014/D11.

²⁹⁰TD 2014/D12.

²⁹¹TD 2014/D14/

Even though the above questions were raised and rulings were made regarding Bitcoin, there are still some challenges facing the regulation of Bitcoin in regards to taxing Bitcoin transactions.²⁹² Firstly, Bitcoin is an anonymous peer-to-peer network, which can make it extremely difficult to track this digital currency and which further implies that numerous Bitcoin transactions can be undetected for tax considerations.²⁹³ Secondly, because virtual and digital currencies such as Bitcoin can be accessed from anywhere in the world, it is seen as a ‘super tax haven’ in order to escape any tax obligations within Australia, on individuals as well as businesses.²⁹⁴ Lastly, virtual and digital currencies such as Bitcoin may not be associated to a particular jurisdiction, which is needed, under taxation laws, to identify the relevant asset to be taxed.²⁹⁵

Although the above-mentioned challenges exist, Ms Preston from Treasury made the following comment:²⁹⁶

[Treasury] will continue to assess the environment, but I would stress that it is an industry in its infancy. So I think that it is a little bit early in the process to jump in and suggest that there should be changes to the tax law to accommodate it.

As a result of the challenges facing taxation of Bitcoin transactions, the Senate Committee made the following two recommendations on the regulation of tax on virtual and digital currencies:²⁹⁷

Recommendation 1

The committee is of the view that digital currency should be treated as money for the purposes of the Goods and Services Tax. As such, the committee recommends that the government consults with the states and territories to

²⁹²Many of these challenges were discussed in Chapter 2, but it is worth recalling them.

²⁹³Stewart and Emery, above n 201, 5.

²⁹⁴Omri Marian, ‘Are Cryptocurrencies Super Tax Havens?’ (2013) 38 *Michigan Law Review First Impressions* 112.

²⁹⁵Organisation for Economic Corporation and Development (OECD), *BEPS Action 1: Address the Tax Challenges of the Digital Economy* (September 2014), Public Discussion Draft, 5 <<http://www.oecd.org/ctp/tax-challenges-digital-economy-discussion-draft-march-2014.pdf>>.

²⁹⁶Parliament of Australia, above n 25, 36.

²⁹⁷*Ibid* 36.

consider amending the definition of money in the *A New Tax System (Goods and Services Tax) Act 1999* and including digital currency in the definition of financial supply in *A New Tax System (Goods and Services Tax) Regulations 1999*.²⁹⁸

Recommendation 2

The committee recommends that further examination of appropriate tax treatment of digital currencies should be included in the taxation white paper process, with particular regard to Income Tax and Fringe Benefits Tax.²⁹⁹

The recent changes to GST on Bitcoin transactions make it clear that regulation of some kind is crucial to businesses and consumers in understanding whether they are subject to paying tax when using Bitcoin.³⁰⁰ These decisions are still in progress and it remains to be seen what the Australian Government and ATO will decide in regard to tax on Bitcoin transactions. However, the regulation of tax within Bitcoin transactions is important and the proposal given by the Australian Senate is a way forward in monitoring and regulating tax activities of businesses and consumers who make use of Bitcoin exchange platforms in their daily activities.³⁰¹

In general, there is consensus on the regulation of Bitcoin exchange platforms to monitor the payment of taxes within Bitcoin transactions.³⁰² The Australian Senate Report also considers that the Governor-General and RBA agree with this approach to regulation.³⁰³ In regulating Bitcoin exchange platforms for tax purposes, Emery suggests that the following regulations will need to be put in place:³⁰⁴

- (i) insisting on Tax File Numbers and/or Australian Business Numbers of Bitcoin users;

²⁹⁸Ibid 34.

²⁹⁹Ibid 36.

³⁰⁰Ibid.

³⁰¹Stewart and Emery, above n 201.

³⁰²See for example Omri Marian, 'A Conceptual Framework for the Regulation of Cryptocurrencies' (2015) 82 *University of Chicago Law Review Dialogue* 53, 64 and Terence Wong, 'Bitcoin Deconstructed: Part 1 – Concepts and Signposts' (2014) *Australian Banking and Finance Law Bulletin* 70.

³⁰³Stewart and Emery, above n 201, 27. See specifically Australian Parliament, above n 25, 34-44.

³⁰⁴Ibid 28.

- (ii) withholding taxes on transfers of non-Australian resident tax payers who owns more than one Bitcoin account;
- (iii) verification and reporting of users' accounts when transacting in Bitcoin; and
- (iv) widespread reporting obligations under the OECD guidelines.³⁰⁵

This thesis argues that the above-mentioned regulation of tax within Bitcoin exchange platform businesses will give effect to a functional and practical framework that can benefit both the Australian Government and businesses and consumers who make use of Bitcoin transactions, and hence should be implemented. Subsequent to the taxation issues created by virtual and digital currencies, Bitcoin transactions present issues of tax evasion. This is because there is no government controlling this digital currency and the transactions are done through an online 'wallet', which is anonymous and therefore undetectable for tax purposes. Therefore, it is argued that in order to limit the evasion of tax within Bitcoin transactions, the ATO and Australian Government must amend the current taxation legislation that requires Bitcoin exchange platform businesses to request information from their users and their payments and to submit a report to the ATO on these payment activities. This will encourage clarity of taxation within Bitcoin transactions and whether consumers and businesses using Bitcoin as a payment system are evading tax for either Income Tax, CGT or GST purposes.

Australia is still in a wait-and-see approach in regard to the regulation of tax. This is similar to the approaches in the US and Canada. The regulation of tax activities and tax evasion within Bitcoin transactions has captured the attention of the ATO and Australian Government; however, they have not considered the importance of tax evasion activities within Bitcoin transactions. Therefore, this thesis argues that Australia should move towards a more regulated framework for taxation within Bitcoin transactions for the reasons considered in the next section.

³⁰⁵OECD, above n 295.

4.6 Discussion on the Regulatory Framework of Bitcoin

The impact virtual and digital currencies have had, and still have, on transactions have made regulation in this area inevitable. Regulation is also needed to deal with the legal issues discussed in Chapter 3 and whether Bitcoin will eventually be recognised as legal tender. Therefore, a key aim of this thesis is to examine the regulation of Bitcoin in different foreign jurisdictions in regard to these legal challenges. Even though some countries such as the US, Canada, the EU and Australia³⁰⁶ do not have appropriate regulation in certain areas of law regarding Bitcoin, this section will explore the possible reasons why Bitcoin should be regulated on some level in Australia. The main reasons for regulating Bitcoin include firstly that the risks associated with Bitcoin to consumers and businesses cannot go without regulation. Secondly, further regulation of Bitcoin on some level will demonstrate the benefits of Bitcoin and will improve its acceptability.

These reasons further indicate that if regulation of Bitcoin is disregarded, consumers and businesses will be left unprotected against risks such as money laundering, fraud and tax evasion. Likewise, observing other countries and their regulation of Bitcoin may also pose similar risks to consumers and businesses that use Bitcoin as a payment facility. Therefore, consumers and businesses that choose to deal in Bitcoin should bear these risks because of some risks not being able to be lessened through regulation.³⁰⁷ However, governments should attempt to inform and make consumers and businesses aware of possible economic loss and risks associated with it.³⁰⁸ Because of the anonymous and decentralised characteristics of Bitcoin, it is difficult to apply regulation directly to Bitcoin, but awareness and guidance notes on the use of Bitcoin is a vital step towards regulation of Bitcoin on some level.

Further to this discussion, it is helpful to indicate that because of the fact that virtual and digital currencies such as Bitcoin are still unregulated, society has not fully grasped the concept of it and therefore still trust in the traditional bank–customer

³⁰⁶See in general Guest Author, *Freedom of Choice, Bitcoins and Legal Tender* (August 2014) OECD Insights <<http://oecdinsights.org/2014/08/27/freedom-of-choice-bitcoins-and-legal-tender/>>.

³⁰⁷McConnell, above n 2, 41.

³⁰⁸*Ibid.*

relationship.³⁰⁹ As a result, consumers and businesses use Bitcoin at their own risk.³¹⁰ This makes society feel uneasy regarding the use of Bitcoin.³¹¹ With this in mind, it will be beneficial to have a semi-regulated environment for Bitcoin and to gain the trust of society in using Bitcoin and the benefits it has. By regulating Bitcoin on some appropriate level and accepting its benefits, as discussed in Chapter 2, illegal activities such as money laundering and tax evasion can be limited while reassuring acceptability.³¹² However, for the government to propose regulation on the use of Bitcoin, the following factors are relevant when thinking of possible regulation for virtual and digital currencies such as Bitcoin: the players in the Bitcoin system, global cooperation, and neutrality. These factors will accordingly be discussed within a regulatory perspective in Australia.

4.6.1 *Players in the Bitcoin system*

There exists a broad range of Bitcoin users, which can include users who buy Bitcoins and store them, users who mine Bitcoins, and Bitcoin exchange platforms. As mentioned, it is difficult to directly regulate Bitcoin; however, these specific users or players within the Bitcoin system can be specifically focused on within a regulatory framework. Within the broad range of Bitcoin users, exchange platforms will be the most straightforward to approach as they are independent companies acting between a user and Bitcoin.³¹³ Therefore, regulation of these companies will be much easier than trying to regulate each user of Bitcoin independently. Kelsey Penrose describes this as ‘it is not who you are in the Bitcoin ecosystem, but what you do with Bitcoins that will affect whether regulations touch you’.³¹⁴

³⁰⁹See Maria Arias and Yongseok Shin, ‘There are Two Sides to Every Coin – Even to the Bitcoin, A Virtual Currency’ (2012) *Money and Monetary Policy* 1.

³¹⁰*Ibid.*

³¹¹Yermack believes that Bitcoin transactions are more theoretical than transactional in nature – David Yermack, ‘Is Bitcoin a Real Currency? An Economic Appraisal’ (2014) New York University, Stern School of Business and National Bureau of Economic Research <<http://online.wsj.com/public/resources/documents/NBER.pdf>>.

³¹²Jeff Cox, ‘Bitcoin’s Four Steps to Wall Street Acceptance’, *CNBC* (online), 8 January 2014 <<http://www.cnbc.com/2014/01/08/>>.

³¹³*Ibid.*

³¹⁴Penrose, above n 279.

4.6.2 *International Cooperation*

Having a global consensus regarding Bitcoin regulation is one step forward towards regulating Bitcoin effectively on some level. One country's laws might not be the same as another country's and thus the user of Bitcoin can escape liability. This is especially the case with Bitcoin, which is not recognised as legal tender and can be used in money laundering activities and tax evasion. Furthermore, some of the recommendations made by other countries regarding the regulation of virtual and digital currencies such as Bitcoin point towards an international level of regulation.³¹⁵ This can prove difficult because each country would have to adopt international law into their domestic law, but if countries can agree on consistent regulation it could be successful. Therefore, according to Professor Grinberg on challenges of tax law, 'we are witnessing the crystallization of a new international tax-enforcement regime, which represents a remarkable shift in international norms'.³¹⁶ However, most countries have introduced some type of guideline that recognises Bitcoin as a commodity and therefore subject to barter transaction laws. In this case, and because it is recognised as a commodity, it is uniform in all countries because of its bartering characteristics.³¹⁷

Unlike Australia and the EU, the US and Canada are involved in proactive consideration for regulation regarding money laundering. This thesis suggests that Australia, as an international player, should consider similar proactive consideration for policies regarding the use of Bitcoin within financial institutions as well as how businesses and consumers will need to deal with these transactions. Furthermore, these countries have all shown consideration in regard to tax evasion in Bitcoin transactions, but more international cooperation is necessary to achieve a unanimous decision on whether virtual and digital currencies such as Bitcoin is legal tender and therefore acceptable to use as a financial product.

³¹⁵Ibid. See also Lucy McNulty, 'In Bitcoin, We Trust?' (2013) 32 *International Financial Law Review* 4; Gemma Varriale, 'Bitcoin: Regulating the Wild West' (2013) 32 *International Financial Law Review* 17.

³¹⁶Itai Grinberg, 'The Battle over Taxing Offshore Accounts' (2012) 60 *UCLA Law Review* 304, 322.

³¹⁷Ed Howden, 'The Crypto-Currency Conundrum: Regulating an Uncertain Future' (2015) 29 *Emory International Law Review* 741, 768.

4.6.3 *Neutrality*

Some of the characteristics of Bitcoin are that it is global, easily accessible, open, accommodating and innovative to any user. For governments to introduce regulation in regard to the legal operation of Bitcoin it is necessary to find a balance between the rights and protection of users and the benefits Bitcoin gives rise to. Therefore, governments should look towards adapting current laws to fit general regulation of Bitcoin across a range of areas such as money laundering, fraud and tax evasion. Through governments keeping Bitcoin regulation neutral and the freedom to evolve, it keeps its characteristics and benefits to those users who prefer payments in such a way.³¹⁸

In summary, the issues considered in Chapter 3 are of such importance that there exists sufficient reason for Australia to implement some level of regulation or consider policy considerations to protect businesses and consumers who want to use Bitcoin as a payment option.

4.7 **Conclusion**

This chapter dealt with the regulation of Bitcoin in Australia as well as globally by discussing the regulation in the EU, the US and Canada. This discussion centred on the three different approaches to regulation of Bitcoin in each country and specifically looking at the issues considered in Chapter 3. The US and Canada have a similar approach to regulation of money laundering, whereas Australia is in a wait-and-see approach. In regard to the EU, they are unclear whether money laundering regulation is needed for Bitcoin transactions.

In regard to tax evasion, the US, Canada and Australia have all issued guidelines to businesses and consumers regarding taxation within these transactions, which categorises them within a wait-and-see approach. On the other hand, the EU identified in its first case that Bitcoin is not subject to tax; however, there are no guidelines issued to businesses or consumers regarding the overall treatment of tax within Bitcoin transactions. Even though there seem to be inconsistencies regarding

³¹⁸See Ferdinand Reyes, *Digital Currency Summit Andorra: Bitcoin in the Banking Nation* (2014) Bitcoin Magazine <<https://bitcoinmagazine.com/articles/digital-currency-summit-andorra-bitcoin-in-the-banking-nation-1414177604>>.

the regulation of Bitcoin in these countries, all the countries in this thesis consider Bitcoin as a commodity and not legal tender. Therefore, it is subject to the same legal rules as barter transactions, which make the rulings on Bitcoin more convenient because of the bartering system being common on a global scale.

This chapter further specifically examined the regulation of Bitcoin in Australia and considered how businesses and consumers will be impacted within an unregulated Bitcoin framework. Issues such as the use of Bitcoin by financial institutions, consumer protection, money laundering and tax were considered and whether some level of regulation is necessary within all these areas because Bitcoin does not have legal tender status. Furthermore, institutions such as AUSTRAC, the ATO and the ACCC have provided consumers and businesses with updated guidelines on Bitcoin treatment, which is a valuable way of keeping them informed of Bitcoin news. However, the issues relating to Bitcoin will need more regulation on some level in Australia to keep consumers and businesses protected from unregulated challenges such as money laundering and tax evasion. Whether Bitcoin will be regulated as legal tender and accepted by financial institutions as a financial product remains to be seen. However, the FSI and Australian Senate have recognised the need for self-regulation in regard to virtual and digital currencies such as Bitcoin in the form of an *ePayments Code*. The prospect of such implementation is still in a wait-and-see approach, but Australia is positively making progress in this regard.

The following chapter will provide concluding remarks and recommendations on whether Bitcoin should be regulated in Australia or not. If this is the case, it will further recommend whether legislation or policies concerning the treatment of Bitcoin transactions in Australia need to be implemented.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Virtual and digital currencies such as Bitcoin have gained popularity and are viewed as a ‘revolutionary payment system’.¹ However, as discussed in this thesis and agreeing with Grimmelmann, the development of technology and in particular Bitcoin has given rise to legal issues of such a payment system, for example, whether Bitcoin is recognised as legal tender, money laundering activities and the use of Bitcoin for tax evasion activities.² Therefore, the primary aim of this thesis was to examine these key legal issues and the challenges it creates for regulation in Australia and other foreign jurisdictions. It was submitted that there is a need for regulation in selected countries whereas other countries have passed legislation dealing with specific Bitcoin issues and the use thereof as a payment system.

The use of Bitcoin and the questions and aims addressed in this research identified that particular regulation or policy consideration is needed to deal with the challenges Bitcoin create. This has been addressed through considering general banking law principles and how Bitcoin can possibly be regulated. To this end, the thesis examined the use and regulation of Bitcoin in foreign jurisdictions, which demonstrated the approach and scope of regulation of virtual and digital currencies in Australia and the selected foreign jurisdictions.

This chapter provides an overview of key findings and recommendations on the regulation of Bitcoin in Australia, drawing on the experience of regulation in foreign jurisdictions. A regulatory framework for Bitcoin transactions is useful to protect businesses and consumers when using it as a payment method.

¹Stephan Small, ‘Bitcoin: The Napster of Currency’ (2015) 37 *Houston Journal of International Law* 581, 640.

²James Grimmelmann, ‘Anarchy, Status Updates, and Utopia’ (2014) 35(1) *Pace Law Review* 135, 135.

5.2 Overview of the Thesis

In addressing the first research question on the meaning of Bitcoin and its legal status, Chapter 2 dealt with whether virtual and digital currencies such as Bitcoin can be money and whether it fulfils the functions of money in a legal sense. It is evident that money has changed and developed its form and characteristics from a bartering system, which was physical, to what we now identify as virtual and digital currencies, which are seen as non-physical. Virtual and digital currencies such as Bitcoin are categorised as incorporeal and this leads to the question as to whether Bitcoin fulfils the functions of money and therefore ought to be considered legal tender. As discussed in Chapter 2, the functions of money include that it is a medium of exchange, a unit of account and a store of value. It was established that Bitcoin, as a digital currency, fulfil all three functions of money; however, it lacks legal tender status. This is because the Australian Government has not yet classified or accepted Bitcoin as a legal currency.

Apart from Bitcoin not being classified as legal tender, its anonymous and private characteristics can lead to significant legal challenges within a legal framework. Brito and Castillo remark that ‘like any technology that can be used for good, it can also be used for ill’.³ This was clear from the discussion of different legal issues in Chapter 3 of this thesis. The legal issues considered were firstly, whether Bitcoin is categorised as legal tender and financial product within the traditional bank–customer relationship; secondly, how Bitcoin is used as a vehicle to engage in money laundering activities; and lastly, how Bitcoin transactions are used to avoid paying tax on certain transactions.

The first legal issue regarding the use of Bitcoin considered the distinction between the traditional bank–customer relationship and Bitcoin transactions as a financial product. This is relevant because, even though Bitcoin fulfil the functions of money, it is not considered a financial product and hence legal tender. Subsequently, the characteristics of Bitcoin make it distinct from the traditional bank–customer relationship, which is fundamental to the existence of a transaction. This

³Jerry Brito and Andrea Castillo, *Bitcoin: A Primer for Policymakers* (Mercatus Center, 2013) 38. See also Nikolei Kaplanov, ‘Nerdy Money: Bitcoin, the Private Digital Currency, and the Case against Its Regulation’ (2012) 1 *Loyola Consumer Law Review* 25.

relationship, together with a central authorising body such as the RBA, is what makes a financial product exist between a bank and its customers. In comparison, a Bitcoin transaction has no intermediary bank clearing transactions on behalf of the customer and therefore it is only seen as a peer-to-peer network and not part of a financial institution.⁴ Thus, there is no legal relationship within a Bitcoin transaction as there are no contractual legal duties or obligations within a Bitcoin transaction.⁵

In light of the above and owing to the unregulated nature of Bitcoin, criminal activities such as money laundering can occur as Bitcoin's characteristics allow for it to be abused.⁶ The use of Bitcoin and the unregulated nature of virtual and digital currencies make it difficult to control money laundering activities within these transactions. However, as discussed, the private and anonymous nature of Bitcoin transactions make it challenging for government agencies like AUSTRAC, FinCEN and FINTRAC to control and monitor Bitcoin transactions for money laundering activities. This was evident in the *Liberty Reserve* and *Silk Road* cases mentioned in Chapter 3. Given the fact that Bitcoin is generally not recognised as legal tender and there is no central authority (third party bank) regulating Bitcoin transactions, money laundering activities are difficult to regulate without the appropriate legislation.

Therefore, in relation to money laundering, Chapter 3 considered the AML/CTF legislation and that Bitcoin may be included under this legislation to deal with money laundering activities used within Bitcoin transactions. However, the legislation is limited and still evolving, but other measures, together with the AML/CTF legislation, can be used to assist in combating money laundering activities within Bitcoin transactions. Within the banking industry KYC policies are an important tool when dealing with customers.⁷ The KYC policy ensures that issues such as money laundering do not occur because the bank–customer relationship is open and not private. In contrast, a Bitcoin transaction does not have the same level of regulation and it will be difficult for governments to include such a policy in a

⁴See in general Nicole Swartz, 'Bursting the Bitcoin Bubble: The Case to Regulate Digital Currency as a Security or Commodity' (2014) 17 *Tulane Journal of Technology and Intellectual Property* 319, 322.

⁵See Chapter 3.

⁶See in general Jonathan Zittrain, 'The Generative Internet' (2006) 119 *Harvard Law Review* 1974.

⁷Philip Ruce, 'Anti-Money Laundering: The Challenges of Know Your Customer Legislation for Private Bankers and the Hidden Benefits for Relationship Management ("The Bright Side of Knowing Your Customer")' (2011) 128(6) *Banking Law Journal* 548.

peer-to-peer network. However, the Australian Government and agencies such as AUSTRAC could require exchange platforms to incorporate a KYC policy within their business structure, which may lead to a decrease in money laundering activities through these types of platforms.⁸

Apart from issues concerning Bitcoin and money laundering, the use of Bitcoin also raises critical questions about taxation and tax evasion. As discussed in Chapter 3, the ATO released a draft of rulings in 2014 relating to the treatment of tax on digital currencies such as Bitcoin.⁹ The ATO stated in these rulings that Bitcoin will be considered as property (commodity) and not a legal currency.¹⁰ This part of the thesis considered GST, Income Tax and FBT relating to Bitcoin transactions. Currently, Bitcoin transactions are not subject to GST because it will lead to transactions being double taxed, which is not beneficial to businesses dealing with Bitcoin as a payment system. This will also defeat the purpose of double-spending not applying within Bitcoin transactions. Furthermore, Bitcoin is subject to Income Tax and also CGT where Bitcoin is used as an investment to generate an income. Similarly, employers who pay their employees with Bitcoin will be subject to FBT because Bitcoin is considered property.

Lastly, the challenge with Bitcoin is that it can be used for tax evasion activities because of its unique characteristics. Many Bitcoin transactions go unreported and therefore tax evasion is a significant issue to be considered. This is further evidenced by the fact that Bitcoin has no central place of business and therefore no connection to a place of origin, which makes tax evasion contentious.

To gain some insights into how countries have approached the regulation of Bitcoin, especially regarding Bitcoin as legal tender, money laundering and tax evasion activities, Chapter 4 identified and examined three different approaches taken by countries regarding the use and regulation of Bitcoin. The three approaches broadly encompass countries that ban or restrict the use of Bitcoin through regulation;

⁸Parliament of Australia, The Senate, Economics References Committee Report, *Digital Currency – Game Changer or Bit Player* (August 2015) 57
<http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Report>.

⁹Ibid 27.

¹⁰See Chapter 3.

countries that have a cautious wait-and-see approach to Bitcoin regulation; and countries that passed specific Bitcoin regulation. In line with these approaches, Chapter 4 discussed three international jurisdictions as exemplars in terms of the development of the approach to regulating Bitcoin.

The first relevant jurisdiction was the EU. The EU in general is seen as not implementing any regulation for Bitcoin yet. The EU indicated that Bitcoin is not legal tender but recognised it as a commodity and therefore subject to bartering rules. Furthermore, as indicated in Chapter 4, the EU has developed an Action Plan to prevent money laundering activities using Bitcoin. Specifically, this EU Action Plan will be looking at how guidelines should focus on educating consumers and businesses regarding the use of Bitcoin as a payment system.¹¹ However, there is no indication from the EU that they will implement specific legislation to regulate Bitcoin within money laundering activities. Lastly, the EU has dealt with its first case regarding the use of Bitcoin in transactions. This was in the 2015 case of *Skatteverket v David Hedqvist*¹² where the court held that Bitcoin transactions are not subject to any VAT at this stage. However, users dealing in Bitcoin transactions, as well as Bitcoin exchange platforms, are required to record their payments in the EU, which is aimed at preventing tax evasion through virtual and digital currency platforms.

The second relevant jurisdiction was the US. The US has passed specific Bitcoin laws regarding its use in transactions. Firstly, the US recognises that Bitcoin is a commodity rather than legal tender for payment purposes. This was confirmed in the case of *SEC v Shavers* where the court held that Bitcoin is seen as a form of money and payment system, even though it doesn't have legal tender status.¹³ In regards to the regulation of money laundering laws and Bitcoin, the US has amended existing money laundering legislation in order to regulate the misuse of Bitcoin transactions for money laundering purposes. This legislation is specifically aimed at controlling

¹¹See Sergii Shcherbak, 'How Should Bitcoin Be Regulated?' (2014) 7(1) *European Journal of Legal Studies* 42.

¹²C-264/14 (22 October 2015)

<<http://curia.europa.eu/juris/document/document.jsf?text=&docid=170305&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=520007>>.

¹³*Security Exchange Commission v Trendon T Shavers and Bitcoin Savings and Trust* Case No. 4:13-CV-416, 3

and monitoring money transmission businesses (Bitcoin exchange platforms) when dealing with the exchange of Bitcoin.¹⁴ FinCEN further argued and submitted in a guideline that these businesses are required, by law, to fulfil the requirements of money laundering monitoring as well as the KYC policies when Bitcoin is used as a payment system. Lastly, the IRS also issued guidelines to consumers and businesses on how tax will apply to Bitcoin transactions and this was done to protect consumers and businesses from losing money.¹⁵ This guideline argued that Bitcoin transactions are subject to tax regulations similar to bartering laws. The US, therefore, is proactive in regulating the use of Bitcoin to some extent, but is still limited in regulation within other areas of law.

The remaining jurisdiction considered in regard to regulation of Bitcoin was Canada. Although Canada has seemingly adopted a wait-and-see approach, especially in relation to tax regulation of Bitcoin, it has taken more proactive steps to address money laundering activities used within Bitcoin transactions. With regards to Bitcoin being considered a legal currency, Canada recognises that Bitcoin is a payment system; however, it is not accepted as legal tender. Therefore, Bitcoin is subject to bartering transactions and regulated as a commodity rather than a legal currency. Following this interpretation of Bitcoin as ‘money’, Canada passed a Bill, which received royal assent in 2014, on the treatment of Bitcoin and money laundering activities within money transmitting businesses (Bitcoin exchange platforms). FINTRAC further submitted that the Bill is limited in its application of money laundering regulation because Bitcoin is not recognised as legal tender; however, it is relevant within Bitcoin exchange platforms. For example, it states that these businesses need to fulfil the requirement of money laundering laws and include how a KYC policy should be implemented and maintained by these businesses.¹⁶ A further requirement made by the Bill is that Bitcoin exchange platforms must report Bitcoin transactions to FINTRAC to fulfil the requirements set out in the KYC policies. Therefore, Canada has been proactive in the regulation of money laundering activities within Bitcoin transactions; however, Canada still lacks regulatory reform

¹⁴ Brito and Castillo, above n 3, 29.

¹⁵ Financial Crimes Enforcement Network, Application of FinCEN’s Regulations to Persons Administering, or Using Virtual Currencies, Guidance FIN-2013-G001 (March 2013).

¹⁶ See in general Canadian Government, *An Act to Implement Certain Provisions of the Budget and Other Measures* (February 2014) Bill C-31, s 256(2).

within tax laws and Bitcoin transactions. In regard to the treatment of tax within Bitcoin transactions, the CRA has issued guidelines to consumers and businesses that Bitcoin will be treated as a commodity and not a currency.¹⁷ The CRA considers Bitcoin to be taxed when used as income and will apply to the same rules as a bartering transaction.

Further, Chapter 4 considered the regulation of Bitcoin in Australia and how Australia views the regulation of virtual and digital currencies like Bitcoin. Therefore, Chapter 4 explored the current regulatory framework of Bitcoin in Australia and how it applies to the banking system as a legal currency, consumer and business protection laws as well as money laundering and tax evasion activities.¹⁸ The current regulatory framework in Australia is largely in a wait-and-see phase. Australia's position on Bitcoin as a currency is that it is a commodity and not legal tender. Therefore, it is seen as a payment system and subject to the usual bartering rules as a commodity. Furthermore, ASIC and the RBA do not consider Bitcoin a financial product and therefore it does not fall within the *Corporations Act* as a regulated payment system. However, the RBA and ASIC submitted that it is possible to be recognised as a financial product in the future if a suitable regulatory reform is in place. Therefore, to provide protection to those consumers and businesses dealing with Bitcoin as a payment system, Chapter 4 argued that the RBA and the Australian Government apply a self-regulatory model to Bitcoin payments such as the *ePayments Code*, which applies to those businesses dealing with Bitcoin as an exchange platform. This part of Chapter 4 further argued that the current AML/CTF legislation does not include Bitcoin as a payment form for money laundering activities, but that it has the potential to. AUSTRAC submitted that there is no urgency in regulating Bitcoin within the current AML/CTF legislation as there have been minimal cases of money laundering activities. However, this part of the thesis argued that suitable KYC policies will assist with the protection of consumers and businesses when exchanging and dealing with Bitcoin through Bitcoin exchange platforms. Lastly, the ATO proposed that Bitcoin is considered an asset (commodity) for tax purposes. The Australian Senate also considered Bitcoin as a commodity and

¹⁷Canada Revenue Agency, *What You Should Know About Digital Currency* (December 2014) Factsheet <<http://www.cra-arc.gc.ca/nwsrm/fctshts/2013/m11/fs131105-eng.html>>.

¹⁸See detailed discussion above.

not legal tender for tax purposes to avoid tax evasion activities by consumers and businesses using Bitcoin exchange platforms to make payments.

5.3 Key Findings and Recommendations

The following section will deal with a few key findings and recommendations. It will further illustrate how these findings and recommendations can assist in determining the extent to which Bitcoin is or should be regulated in Australia.

5.3.1 Is Bitcoin Classified as Legal Tender?

One of the key questions considered in this thesis was whether virtual and digital currencies such as Bitcoin ought to be classified as legal tender, especially regarding the different characteristics and features it introduces to payment systems.

This research argued that Bitcoin is not classified by the Australian Government as legal tender. Chapter 2 further argued that Bitcoin, as a digital currency, fulfils the functions of money; however, it does not retain legal tender status. Even though it has been established that Bitcoin does not have legal tender status, it is accepted that Bitcoin can be classified similar to a commodity. This makes it possible for Bitcoin, which is classified as a type of good (or asset), to be exchanged for other goods of the same kind.¹⁹ Therefore, because Bitcoin can be treated as a commodity, it will have similar features to a barter transaction, which indicates that the rules, regulations and law on bartering will apply analogous to Bitcoin transactions.

Furthermore, it was established in Chapter 3 that Bitcoin is not a ‘financial product’ as it does not fulfil the requirements of such a product under the *Corporations Act*. This means that it is not recognised as a regulated form of money. However, ASIC announced that it can apply as a ‘financial product’ when companies like PayPal and banking institutions accept digital currencies such as Bitcoin as a payment method to expand their product offerings. The Australian Banking Authority has indicated that Bitcoin compliments the existing payments system rather than act as a substituted payment system and this thesis agrees with this statement as the *Payment System Regulation Act 1998 (Cth)* can maintain Bitcoin alongside the current payment

¹⁹See Chapter 2 and Australian Taxation Office ruling.

system regime. As soon as Bitcoin becomes a concern because of its volatility, the RBA has the power to regulate over it. The current banking framework for payment systems as well as consumer laws are designed to instil trust and confidence in consumers and businesses making payments; however, it is difficult to control and monitor these payments when making use of Bitcoin. Therefore, regulation, to some extent, is needed for Bitcoin as an alternative payment system.

This thesis argued that the *ePayments Code*, which is applicable to EFTs, ensures consumer and business protection when making payments and therefore banking institutions could introduce a similar *ePayments Code* that applies to Bitcoin transactions for self-regulatory purposes.²⁰ This *ePayments Code* would specifically apply to Bitcoin exchange platforms and businesses dealing in Bitcoin payments. This self-regulatory guideline will assist in consumers and businesses having the necessary protection, which will be able to co-exist with other banking and consumer regulations.

In summary, Bitcoin is not accepted as legal tender in Australia; however, it possesses commodity-like characteristics that makes the use of this private and decentralised currency to a certain extent legal and used by Australian businesses and consumers. Furthermore, because Bitcoin has a limited circulation of 21 million coins, it further supports the argument that Bitcoin is not accepted as legal tender as a payment system in Australia. Therefore, because of Bitcoin's unique characteristics as well as its drawbacks as a payment system, this thesis argues that it should not be recognised as legal tender. It is possible to co-exist as a payment system with the current payment systems recognised as legal tender; however, because of its volatility, it is argued that it will be appropriate to regulate Bitcoin through the RBA and banking institutions as a commodity.

Considering these findings, the following recommendations are made:

Recommendation 1: Bitcoin should be treated as a commodity for payment purposes but not a legal currency.

²⁰See Chapter 3.

Recommendation 2: The Reserve Bank of Australia and the Australian Government control and monitor Bitcoin payments through a self-regulatory regime similar to the *ePayments Code*, which could be taken control of if there are stability and volatility concerns.

5.3.2 Anti-Money Laundering Regulation within Bitcoin Transactions

The second key issue examined by this thesis was money laundering and the legal challenges it creates when dealing with Bitcoin transactions when it is not considered legal tender in Australia.

The main issue with Bitcoin transactions is that banking institutions turn down customers who want to make payments with Bitcoin because of the money laundering risks attached to Bitcoin payments. Bitcoin businesses find it difficult to open bank accounts with banking institutions because of these risks and the requirements placed upon banking institutions within anti-money laundering legislation such as KYC policies. The current AML/CTF legislation does not include Bitcoin as a form of currency for money laundering purposes, but it has the potential to include digital currencies within this regime. The AML/CTF legislation in Australia is under review in order to determine whether virtual and digital currencies such as Bitcoin should be regulated under this legislation; however, Australia appears to be in no rush to amend the legislation.²¹ As discussed above, Bitcoin is not legal tender and also different from any other current payment system, making regulation difficult and therefore governments need to establish a suitable regulatory framework in regards to money laundering activities within Bitcoin transactions.

Therefore, this thesis argues that even though Bitcoin is not classified as legal tender and not readily accepted by most banking institutions, because of the criminal activities it can promote, the Australian Government and AUSTRAC should amend anti-money laundering legislation requiring Bitcoin exchange platform businesses to introduce measures similar to a KYC policy. This policy will regulate the

²¹See Paris Cowan, 'Austrac Not Worried by Bitcoin', *IT News* (online), February 2014 <<http://www.itnews.com.au/news/austrac-not-worried-by-bitcoin-373670>>.

relationship between the user and Bitcoin exchange platform on a useful level that will, to an extent, reduce money laundering activities through such platform businesses.

As argued in this thesis, there is a need for regulation in relation to Bitcoin and money laundering. However, it is submitted that existing anti-money laundering schemes can be used to control and monitor money laundering activities to some extent within Bitcoin exchange platform businesses.

Recommendation 1: Amend current AML/CTF legislation to include digital currencies as an alternative payment method through which money laundering can occur, and hence needs to be better regulated.

Recommendation 2: Require Bitcoin exchange platform businesses to implement KYC policies (KYU policies) in accordance with the amended AML/CTF legislation. This will ensure appropriate regulation of money laundering activities within Bitcoin exchange platform businesses.

5.3.3 Tax Regulation and Tax Evasion Activities within Bitcoin Transactions

The last key issue discussed in this thesis is whether Bitcoin transactions are subject to tax treatment under Australian law and whether the current regulatory frameworks make provision for such treatment and tax evasion activities.

Chapter 3 demonstrated that the ATO does not treat virtual and digital currencies such as Bitcoin as a currency but as a commodity and therefore similar to a barter transaction. Initially the Australian Government agreed to tax Bitcoin transactions subject to GST; however, this changed in March 2016. Tax areas such as GST, Income Tax and FBT are currently seen as a commodity and the Australian Government is reluctant to change any taxation legislation to fit this purpose. Therefore, it is imperative for the ATO and the Australian Government to consider a practical framework for Bitcoin. It is submitted that a well-drafted guideline to the treatment of tax will assist in businesses and consumers being aware of their tax obligations and when tax evasion activities are underway.

These guidelines will explain to businesses and consumers the treatment of tax within Bitcoin transactions. However, the main aim of these guidelines will be to require Bitcoin exchange platform businesses to report to the ATO the information of their users and the purpose of their payment activity on the platform. This will increase consistent monitoring by the ATO on whether the Bitcoin payment is income or some other form of imbursement.

The findings above indicate that there is a need for clear guidelines on the treatment of tax and tax evasion activities within Bitcoin transactions. Therefore, this thesis proposes the following recommendations:

Recommendation 1: The ATO and the Australian Government provide clear guidelines to the Australian Bitcoin users on the treatment of tax as a commodity and further investigation into the regulation of tax evasion activities.

Recommendation 2: Existing taxation legislation should not be amended to include Bitcoin as a legal currency for tax purposes; however, more comprehensive and regular guidelines should be provided for consumers, business and Bitcoin exchange platform businesses on the reporting of tax information of users and the type of transactions made to tax the user accordingly and avoid tax evasion.

5.3.4 The Nature and Application of Regulation within Bitcoin Transactions

The last key question that was considered in this thesis is whether Bitcoin, as a payment system, should be regulated in Australia.

Chapter 4 of this thesis made evident that the Senate issued a report regarding the treatment of virtual and digital currencies such as Bitcoin. The recommendations have been provided by the Senate; however, the government mainly responded to and provided recommendations on how money laundering activities and tax evasion

should be treated when using virtual and digital currencies such as Bitcoin.²² It also discussed the relationship between digital currency businesses and financial institutions. However, they have only briefly dealt with whether Bitcoin is considered legal tender and a financial product.

When comparing the current regulatory responses of Bitcoin by the Australian Government against foreign jurisdictions like the US and Canada, Australia using a wait-and-see approach to the regulation of Bitcoin as legal tender and money laundering and tax evasion activities. However, the Australian Government needs to find a balance between the regulation of Bitcoin and the benefits it contains as a payment system. More specifically, the FSI stated that the Australian Government should ‘take a technology-neutral approach to legislation and regulation’ concerning Bitcoin and when dealing with financial matters.²³ However, the FSI also states that ‘on an exceptions basis, technology-neutral frameworks may need to be supplemented with technology-specific regulation’ and when this applies ‘regulators should seek to be technology neutral within that class of technologies where possible’.²⁴

Furthermore, an international agreement on how to treat virtual and digital currencies like Bitcoin may assist in countries adopting or amending their legislation and to deal with the legal issues Bitcoin creates. Therefore, more can be done on an international level to address the legal issues Bitcoin poses as a payment system and what a regulatory framework could consist of. Therefore, this thesis argues that the following recommendations will assist in the controlling and monitoring of Bitcoin as a payment system:

Recommendation 1: The Australian Government should investigate the uses of Bitcoin as a payment system more closely and appoint a specialist committee to consider the regulation of different areas of virtual and digital currencies as not all areas need a legislative framework.

²²See Chapter 4 and the Senate Report.

²³Financial System Inquiry, *Regulation in a Digital Environment* (December 2014) Report 9: Technology

<<http://fsi.gov.au/publications/interim-report/09-technology/regulation-digital-environment/>>.

²⁴Ibid.

Recommendation 2: The Financial Action Task Force, International Monetary Fund and other international organisations related to virtual and digital currency regulation need to address, on an international level, whether Bitcoin is recognised as legal tender and whether legislation can deal with money laundering and tax evasion activities by different countries.

5.4 Further Research

The research in this thesis has specifically focused on the regulation of virtual and digital currencies with specific reference to Bitcoin and considered the legal issues associated with money laundering, tax evasion, whether Bitcoin is considered legal tender in Australia, and the effect these legal issues have on the Australian Government, businesses and consumers. However, as the research is limited in scope, there are opportunities for further research in this area. This research does not purport to cover all aspects on the regulation of Bitcoin and further research would be advantageous in the following areas: how privacy and security laws can affect Bitcoin transactions; regulation of employment laws in relation to using Bitcoin as a future remuneration system; and how other countries view the regulation of Bitcoin as this thesis only dealt with the EU, the US and Canada.

This research also only focused on Bitcoin as a digital currency and further research into other virtual and digital currencies could be undertaken. This can be accompanied by research on how Bitcoin and other virtual and digital currencies may impact Islamic Banking infrastructures. Lastly, this research only focused on Bitcoin and tax evasion activities. Further research in tax avoidance will assist governments in regulating Bitcoin-specific transactions through anti-avoidance schemes.

5.5 Concluding Remarks

According to Angel and McCabe ‘a new payment system such as Bitcoin, like any tool, is neither good nor evil on its own, but it is the ethical or unethical use of the

payment system that matters'.²⁵ This has been evident throughout the thesis and the legal issues Bitcoin creates as a payment system. Virtual and digital currencies have developed into an alternative method of payment that has shown many benefits as a payment system for users, but it is also challenging for the banking industry because of its unregulated status. Therefore, this thesis undertook an examination of the regulation of Bitcoin in Australia and the possible regulatory approaches Australia needs to consider for the regulation of Bitcoin.

An extensive examination into the regulation of virtual and digital currencies falls outside the ambit of this thesis; however, the legal issues that were examined in this thesis are of great importance for governments, businesses and consumers when dealing with Bitcoin as a payment system. Moreover, the findings and recommendations in this thesis propose supporting information for a regulatory framework for virtual and digital currencies as an alternative form of payment as a commodity, and for the control and monitoring of money laundering activities and tax evasion activities by Bitcoin users. This thesis has argued that it is possible for Bitcoin to be regulated to some extent to limit the legal risks it imposes as a payment system so that Bitcoin no longer lurks in the dark.

²⁵James Angel and Douglas McCabe, 'The Ethics of Payments: Paper, Plastic, or Bitcoin?' (2015) 132 *Journal of Business and Ethics* 603, 610.

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