

Bitcoin – sending money home

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Abstract

Bitcoin has been identified as capable of providing a feasible solution to transfer money 'home' safely in a cost-effective manner for many, including migrant workers. Notwithstanding the potential perks (efficiency, low cost, absence of foreign exchange problems), there are many pitfalls for potential users of bitcoin for this purpose, given the general absence of regulatory protections. Providing protection for users of bitcoin for this purpose is complicated by broader regulatory concerns such as money-laundering and terrorism-financing. This paper will point to the perks and pitfalls of the use of Bitcoin in remittance and concludes that it has rich potential in that arena, and that the regulatory framework for the use of Bitcoin in the remittance sector provides moderate protection for Australian users.

1. Introduction: will Bitcoin take over the remittance sector?

Recently some headline-worthy phrases have been used in relation to the possibilities of Bitcoin in the remittance market. Bitcoin has been called the 'Über for remittances',² and 'the next big thing' in the remittance market.³ It has been suggested that Bitcoin could actually 'disrupt'⁴ and 'shake up'⁵ remittances, and a Bitcoin remittance operator's user interface has been referred to as a 'killer app'.⁶ A cute portmanteau has even been coined alluding to the use of Bitcoin in remittances – 'rebitances'.⁷ This conference paper will consider these claims and will conclude that although Bitcoin does offer some demonstrable advantages in the remittance market, it is by no means a magic ingredient that will change everything for the better. That is – at least not in the near future, for the world of cryptocurrencies is very dynamic, and there is much development in the payments 'space'.⁸ The possibility of Bitcoin significantly changing the remittance market is therefore of course not excluded. In fact,

¹ Assistant Professor and Director of Mooting, Bond University Australia. Copyright reserved.

² SaveOnSend.com 'Does Bitcoin make sense for international money transfer?' SaveOnSend blog, 25 July 2016, <https://www.saveonsend.com/blog/bitcoin-money-transfer/>. See also Asha McLean, Digital CC ditches bitcoin, rebrands to Digital X, ZDNet Website, 29 October 2015, <http://www.zdnet.com/article/digital-cc-ditches-bitcoin-rebrands-to-digital-x/>.

³ Florian Grailot, 'Bitcoin Might Be The Next Big Thing In The Remittance Market', TechCrunch website, 25 May 2015, <https://techcrunch.com/2015/05/25/bitcoin-might-be-the-next-big-thing-in-the-remittance-market/>.

⁴ Innovationiseverywhere, 'How will technology and bitcoins disrupt the remittance market? Discussion with african startups at afrikoin', Innovationiseverywhere website, <http://www.innovationiseverywhere.com/will-technology-bitcoins-disrupt-remittance-market-discussion-african-startups-afrikoin/>.

⁵ Mark Anderson, 'Bitcoin shakes up remittances as poorer people offered digital deals', The Guardian, 18 August 2014, <https://www.theguardian.com/global-development/2014/aug/18/bitcoin-remittances-market-digital-cash>.

⁶ Jacob Donnelly, 'Could Abra be Bitcoin's 'Killer App'?', Bitcoinmagazine website, 5 May 2015, <https://bitcoinmagazine.com/articles/abra-announced-launch-festival-2015-seamless-remittances-powered-bitcoin-1425593201>.

⁷ See for example The Money Wiki, 'Alternative Currency: Rebitance (Bitcoin Remittance)', <http://themoneywiki.com/wiki/alternative-currency-rebitance-bitcoin-remittance>.

⁸ See UK Government Chief Scientific Adviser, 'Distributed Ledger Technology: beyond block chain', Government Office for Science, December 2015.

positive governmental approaches to the use of Bitcoin and particularly blockchain technology in financial applications, and the proposed treatment of Bitcoin exchanges as reporting entities under the Australian Anti-Money Laundering and Counter-Terrorism Financing regulatory framework, augur well for a broader adoption of Bitcoins in a variety of ‘traditional’ financial applications, including remittances. Although there is legal uncertainty as to the nature of Bitcoins and the applicability of existing legal frameworks to Bitcoin in its different usages, it appears as if in the remittance market it is not predominantly regulatory issues that impact on the adoption and use of Bitcoin in remittances. There are perks and pitfalls in the use of Bitcoin in remittances – this paper seeks to examine these.

2. Remittances and the remittance industry

It is opportune to start with a brief consideration of remittances and the remittance industry. Remittances are used to ‘send money home’. The phrase refers to international money transfer services, generally provided to migrants and other individuals who want to send relatively small amounts of money to their families or other persons in another country. Frequently the recipients of the funds are in developing countries.⁹ The phrase ‘international funds transfers’ is also used as a synonym.

Under the *Financial Transactions Reports Act 1988* (Cth), section 3 defines an ‘international funds transfer instruction’ as ‘an instruction for a transfer of funds that is transmitted into or out of Australia electronically or by telegraph, but does not include an instruction of a prescribed kind’.¹⁰

2.1. The bigger picture – remittances in Australia and in the world

The remittance industry worldwide is huge, with an estimated USD 601 billion being ‘sent home’ in 2015. Remittances sent home by international migrants from developing countries amounted to USD 432 billion in 2015, with India being the largest remittance receiving country (USD 69 billion in 2015), followed by China (USD 64 billion) and the Phillipines (USD 28 billion).¹¹

The following selected facts about remittances give a bit of a picture of the remittance market, and hint at the political, economic, financial and human aspects of the remittance market:

- More than 247 million people, or 3.4 percent of the world population, live outside their countries of birth;¹²
- The Mexico-US corridor is the largest migration corridor in the world, with 13 million migrants in 2013;¹³

⁹ See Australian Centre for Financial Studies (principal authors Kevin Davies and Martin Jenkinson), *Remittances: Their Role, Trends and Australian Opportunities*, A study for Western Union, 2012, 1.

¹⁰ *Financial Transactions Reports Act 1988* (Cth) s 3.

¹¹ World Bank Group, Migration and Remittances Recent Developments and Outlook, Migration and Development Brief 26, April 2016, pg 4-5. See also World Bank Group, *Migration and Remittances Factbook 2016*, (3rd edition) v.

¹² World Bank Group, *Migration and Remittances Factbook 2016*, (3rd edition) pg v.

¹³ *Ibid.*

- Developing countries received approximately \$441 billion in remittance flow in 2015, which is nearly three times the amount of official development assistance.¹⁴ Private money flows therefore vastly exceed public flows in some cases;
- Although figures are available for ‘official’ channels of remittances, the ‘true size of remittances, including unrecorded flows through formal and informal channels, is believed to be significantly larger’;¹⁵
- In 2015, the top recipient countries of recorded remittances were India, China, the Phillipines, Mexico and France;¹⁶
- The cost of remittances is the highest in Sub-Saharan Africa and in the Pacific Island countries (for example, it costs more than 20 per cent to send \$200 from Australia to Vanuatu, and 19 per cent from South Africa to Zambia);¹⁷
- The average cost of remittances worldwide has remained close to 8 per cent.¹⁸ This percentage is still far above the 3 per cent target set in the Sustainable Development Goals set by the United Nations in September 2015;¹⁹ and
- Contrary to some misconceptions about the users of remittance services, statistics indicate that most senders also have a bank account, and ‘just about every one has a smartphone’.²⁰

The following facts about the remittances industry relate more directly to Australia:

- In 2013, Australia was one of the top 10 countries in respect of immigrant stock, amounting to 6.5 million;²¹
- In 2013, the UK to Australia migration corridor was among the top 30 (at 29th place) with 1.3 million stock of migrants from the UK;²²
- Australia is one of the top migrant destinations – following behind (in order of priority) the US, Saudi Arabia, Germany, the Russian Federation, the UAE, the UK, France, Canada and Spain;²³
- Australia was however not among the the top 30 destinations for refugees in 2014;²⁴
- According to the World Bank, USD 1,101 million in remittances (personal transfers) was sent from Australia in 2014.²⁵ The total amount of remittance outflows (including compensation of employees) was USD 7,000 million;²⁶
- None of the remittance corridors starting in Australia ranked among the top 30 corridors internationally;²⁷

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid, vi.

¹⁸ Ibid.

¹⁹ Ibid. For the Sustainable Development Goals, see United Nations, Sustainable Development Goals, <http://www.undp.org/content/undp/en/home/sdgoverview/post-2015-development-agenda.html>.

²⁰ SaveOnSend, ‘Before you Transfer Money’, 25 July 2016, <https://www.saveonsend.com/blog/>.

²¹ World Bank Group, above n 12.

²² Ibid.

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

- Nevertheless, in 2014 Australia was one of the top 20 remittance-sending countries,²⁸ responsible for more than USD 7 million in remittances;
- None of the main remittance corridors emanating from Australia in the \$200 remittance bracket recently fell into the top 30 in terms of offering the lowest cost in remittances;²⁹
- The Australia-Vanuatu remittance corridor is in fact the most expensive at 20.7 per cent of the cost of receiving remittances of \$200.³⁰ The Australia-Lebanon corridor is 24th on the list of most expensive remittance corridor, coming in at 13.1 per cent;³¹
- According to estimates by the Australian Transaction Reports and Analysis Centre (AUSTRAC) there are currently about 6,400 providers of remittance services in Australia, excluding banks and ADIs that also provide international money transfer services;³² and
- Some of the Pacific Island Countries³³ benefit significantly from remittances from Australia.

Purposes of remittances:

Obviously 'sending money home' fulfils a very important private, personal purpose for both senders and recipients. Migrants working abroad may send money home for a number of reasons. According to the World Bank, remittances 'constitute reliable sources of foreign exchange earnings, and cushion households' income during bad times.³⁴ A study by the Australian Centre for Financial Studies indicate that the following reasons dominate for remittances, for example in remittances to :

- Phillipines – support, gifting and urgent matters;
- India – gifting, support, financial payments; and
- China – support, gifting and urgent matters.³⁵

There is also empirical evidence that remittances tend to increase as a result of natural disasters in recipient countries.³⁶

Broader impact of remittances:

²⁸ Ibid.

²⁹ Ibid. (In this regard, see the table 'Lowest Cost Corridors of Sending Remittances for \$200, Q3 2015').

³⁰ Ibid.

³¹ Ibid. (In this regard, see the table 'Highest Cost Corridors of Receiving Remittances for \$200, Q3 2015').

³² Australian Centre for Financial Studies, above n 9, 15.

³³ The PICs are: 'Pacific Island Countries have been traditionally grouped along racial and cultural lines as Melanesia, Micronesia and Polynesia. The Melanesian islands include Papua New Guinea, New Caledonia, Torres Strait Islands, Vanuatu, Fiji and the Solomon Islands. The Micronesian islands include the Marianas, Guam, Wake Island, Palau, the Marshall Islands, Kiribati, Nauru and the Federated States of Micronesia. The Polynesian islands include New Zealand, Hawaiian Islands, Rotuma, Midway Islands, Samoa, American Samoa, Tonga, Tuvalu, the Cook Islands, French Polynesia and Easter Island.' See Monica Costa and Rhonda Sharp, *The Pacific Island Countries Fiji, Papua New Guinea (PNG), Samoa, Solomon Islands, Vanuatu and Tuvalu*, 2011, 2, <https://www.unisa.edu.au/Documents/EASS/HRI/gender-budgets/pic.pdf>.

³⁴ World Bank Group, above n 12.

³⁵ Australian Centre for Financial Studies, above n 9, 15.

³⁶ World Bank Group, above n 11.

Apart from the benefits for individual recipients, the broader social impact is enormous. The importance of remittances have been recognised widely by the international community, including the United Nations, the G20, and of course the World Bank.

Remittance inflows to developing countries have an important impact on the economies of those countries. In some cases, remittance inflows 'are more than three times official development aid ... and even bigger than foreign direct investment inflows once China is excluded'.³⁷ In addition, '[r] emittances have been growing steadily, showing its resilience to global headwinds, while other types of capital flows to the developing economies sharply respond to fluctuations of interest rates in advanced economies or growth prospects in developing countries'.³⁸ Further, '[r]emittances are less volatile and more stable than all other external flows.[R]emittances have been stable during episodes of financial volatility even when capital flows fell sharply. Therefore, remittances help counter-balance fluctuations caused by weakening of capital flows to developing countries'.³⁹ In some small developing countries income from remittances is a substantial percentage of GDP.⁴⁰ Remittances also play an important role in countries without a formal banking system, such as Somalia.⁴¹ Some of these countries that are vulnerable to the remittance market, are countries with which Australia and Australians have special ties.

Remittances are important in regional security and stability, and improvements in the remittance sector will not just impact individuals but larger communities and states. Australia is an important source of remittances for Pacific Island nations, where poverty has been a growing and significant problem.⁴² Remittances play an important role not just for the individuals concerned, but also in the stabilisation of the region.⁴³ Accordingly, there is more than a purely humanitarian reason for ensuring reasonable remittances from Australia to, for example, the Pacific Islands, but an important security consideration as well.⁴⁴ There is evidently a broader social utility in reducing the cost of remittances.⁴⁵

2.2. Main options available for 'sending money home'

³⁷ World Bank Group, above n 12.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ For example, in the case of Tajikistan, it's 42%, and in the case of Nepal 29%. World Bank Group, above n 12.

⁴¹ Laura Armitage, 'Westpac keeps Somali money transfers open until Federal Court hearing', Herald Sun, 26 November 2014, <http://www.heraldsun.com.au/leader/north/westpac-keeps-somali-money-transfers-open-until-federal-court-hearing/news-story/5a53bef9b0045336c9232c06c416bc7f>.

⁴² KC Ooi and RP Buckley, Pacific injustice and instability: Bank account closures of Australian money transfer operators, (2014) 25 *Journal of Banking and Finance Law and Practice*, 243-256, pg ???. The precursor of this article was a Submission to the Financial System Inquiry, 2nd Round Submission.

⁴³ Ibid. See also T.K. Jayaraman, Chee-Keong Choong and Ronald Kumar, 'Role of remittances in small Pacific Island economies: an empirical study of Fiji' (2011) 3 *International Journal of Economics and Business Research*, 5.

⁴⁴ 'The PICs comprise a large part of the 'arc of instability' to Australia's north and northeast, where governments are often disturbed by civil unrest'. See Ooi and Buckley, above n 42. See also Ross Duncan and Satish Chand, 'The Economics of the 'Arc of Instability' (2002) 16(1) *Asian-Pacific Economic Literature*.

⁴⁵ Ralph C Maloumy-Baka and Christian Kingombe, *The Quest to Lower High Remittance Costs to Africa: A Brief Review of the Use of Mobile Banking and Bitcoins*, No 10-2015, CFD Working Papers from Centre for Finance and Development, Graduate Institute, EconPapers.

There are multiple different options available for individual senders who want to remit funds. These can be classified in the following broad categories:

2.2.1. Physical currency transfers through private individuals: this method can include sending cash with persons who travel;⁴⁶ (another similar method of sending cash is through the mail)

2.2.2. Banks or Authorised Deposit-taking Institutions (ADIs): whilst banks/ADIs are arguably the safest way of remitting money, for example by an electronic transfer from the Australian bank account of the sender to the foreign bank account of the recipient, two of the key problems are the high fees associated with international transfers, and also the fact that banks are not always accessible in recipient countries or for the individual recipient;⁴⁷

2.2.3. MTO (Money Transfer Operators or International Fund Transfer Operators [IFTOs], e.g. Western Union and MoneyGram): these are specialised corporations providing international remittance services as their core business. They can also be described as 'Corporate IFTOs'. According to Choice.com.au the three main players in Australia are OFX, World First and CurrencyFair;⁴⁸

2.2.3.1. Banks (ADIs) can sometimes combine forces with MTOs. For example, '[t]hrough the ABMT service [provided by Western Union], the ADI customer is able to use their account as the source or destination of funds transferred between Australia and overseas'.⁴⁹ In this transaction, significant personal details are required from the sender and recipient (would satisfy Know Your Customer (KYC) requirements under AML/CTF regulations).⁵⁰ There is in fact 'considerable scope' in the opinion of the Australian Centre for Financial Studies (ACFS) for 'greater' collaboration between ADIs and MTO in order to 'reduce the cost of providing remittance services'.⁵¹ In their opinion there is also room for increased cooperation with other companies such as mobile services providers;⁵²

2.2.4. Informal IFTOs (often referred to as 'Informal Value Transfer Systems'⁵³ or Hawala systems) – these informal systems depend on a specific trust network in

⁴⁶ Australian Centre for Financial Studies, above n 9, 32.

⁴⁷ 'High fees and difficult access to banks mean international transfers are beyond the reach of many Pacific Islanders'. See Ooi and Buckley, above n 42.

⁴⁸ Andy Kollmorgen 'Overseas money transfers', Choice website, 21 Aug 2014, Choice.com.au <https://www.choice.com.au/money/banking/foreign-transactions/articles/overseas-money-transfers>.

⁴⁹ Australian Government Australian Transaction Reports and Analysis Centre, Explanatory note for consultation purposes, AUSTRAC website, <http://www.austrac.gov.au/sites/default/files/documents/draft-amendments-chapter-65-industry-contribution.pdf>.

⁵⁰ AML-CTF Rules Schedule, Reportable details for international funds transfer instructions – account-based money transfers, available from <http://www.austrac.gov.au/international-funds-transfer-instructions-iftis>.

⁵¹ Australian Centre for Financial Studies, above n 9, 2

⁵² Ibid.

⁵³ Parliament of Australia Joint Committee on Law Enforcement, Inquiry into financial related crime, *Report*, Chapter 4. In the past the 'Eligo National Taskforce' had been established to investigate IVTS because of AUSTRAC's designation of the national threat assessment on money laundering as 'high'. (See paragraph 4.71 in

which funds are transferred. Frequently there is no actual transfer of funds, and there is no actual movement of money across international borders. Although these are informal systems, they function in a manner not unlike that of a correspondent banking relationship;

2.2.5. Others methods of remitting value. These include for example:

- 2.2.5.1. Paypal (by means of a transfer of value between Paypal accounts).⁵⁴ Paypal generally limits transactions to consumers with bank accounts;⁵⁵
- 2.2.5.2. Card-based remittances⁵⁶ - these could include card-to-cash arrangements,⁵⁷ dual card arrangements,⁵⁸ and recipient-only card arrangements;⁵⁹
- 2.2.5.3. Mobile phone remittance methods such as M-Pesa in Kenya.⁶⁰ 'Essentially the process involves individuals transferring phone credit from their account to the account of another individual by way of an SMS message';⁶¹
- 2.2.5.4. Electronic wallets such as the 'Google wallet'.⁶² Funds could be transferred from an electronic wallet of the sender to an MTO's account and the MTO would transfer funds to the electronic wallet of the recipient;⁶³ and
- 2.2.5.5. International developments such as the cross-government 'New Zealand-Pacific Remittance Project', which benefitted from exceptions under the AML/CTF regulations of New Zealand.⁶⁴ A special 'remittance account card' was created by Westpac and Visa.⁶⁵

The various type of remittances and also remittances using Bitcoin are summarised in Table 1 below.

2.3. Problems with traditional remittances

Notwithstanding their widespread use, there are a number of problems with the different types of remittances.

The biggest disadvantage of private personal cash transfer services is that these are based on the availability of a trust-worthy individual to take cash from one country to another on behalf

the report). Details about the task force can be found at http://www.austrac.gov.au/sites/default/files/documents/eligo_fact_sheet.pdf.

⁵⁴ See David M Cook and Timothy Smith 'The Malarkey of Money Transfers: Overlooking E-Bay whilst the Hawaladars are Hunted', Proceedings of the 1st Australian Counter Terrorism Conference, Edith Cowan University, Perth, Western Australia, 30 November 2010, Edith Cowan University, Research online,

⁵⁵ Australian Centre for Financial Studies, above n 9, 2.

⁵⁶ Ibid, 27.

⁵⁷ Ibid.

⁵⁸ Ibid, 28.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid, 29.

⁶⁴ See Ooi and Buckley, above n 42.

⁶⁵ Ibid.

of the sender. Especially if funds were required on an urgent basis by the recipient, this method would be restrictive. In many instances, the risk of loss of funds would be the greatest risk.

The biggest disadvantage in using traditional bank accounts, and a simple international transfer from one bank account to another in a foreign jurisdiction is the fact that it would only be available to persons with accessible bank accounts. The cost of these transactions is also fairly high. Further, according to Australian consumer website Choice, the rates quoted to senders are not always the rates paid, because banks include a 'subject to change without notice' clauses in transfer arrangements.⁶⁶

The use of an MTO offers many advantages, but a number of disadvantages have been identified. For many the primary disadvantage lies in the cost of remittances through MTO. As referred to earlier, the cost differs depending on the remittance corridor in which the funds are transferred, and also on the amount transferred. Where funds are prepaid for example into the accounts of MTOs, prepaid cards, electronic wallets or any other similar service where funds are stored temporarily, the sender faces the risk of failure of the counterparty and the loss of all or some funds.⁶⁷ In this regard the service providers function in a manner similar to that of a deposit-taking institution. The Australian Centre for Financial Studies concludes that 'how regulatory arrangements should be structured for dealing with this convergence, including for the soliciting of funds as well as for the safeguarding of funds deposited, is an open question'.⁶⁸

From the perspective of public authorities, one of the key problems that also affects users of the system, is criminal activity. There is significant evidence that remittance services are used for criminal activities, and in particular for money laundering purposes.⁶⁹ The remittance sector is 'recognised globally as being particularly vulnerable to exploitation by criminals'.⁷⁰ This problem came to the fore in a different way, and negatively impacted on the remittance industry as a whole in Australia. In 2014, a number of Australian banks effectively 'unbanked' remittance services providers because of the reporting (KYC, etc) obligations of the banks under the Australian Anti-Money Laundering and counter-Terrorism Financing (AML/CTF) regulations.⁷¹ These actions have been described as being indicative of 'a banking system that is becoming unwilling to bear the costs and compliance risk of the remittance sector'.⁷² The competing issues involved (the risk of civil penalties for banks under AML/CTF regulation) and the social utility of remittances led to the matter becoming the subject of an application to the Federal Court, and a study by a working group under the oversight of the Attorney-

⁶⁶ Andy Kollmorgen, above n 48.

⁶⁷ Australian Centre for Financial Studies, above n 9, 32.

⁶⁸ Ibid.

⁶⁹ Parliament of Australia Joint Committee on Law Enforcement, Inquiry into financial related crime, *Report*, Chapter 4.

⁷⁰ See Attorney-General Department, *Working Group on Remittance Account Closures Outcomes Statement*, November 2015, <https://www.ag.gov.au/CrimeAndCorruption/AntiLaunderingCounterTerrorismFinancing/Documents/FCS-Outcomes-report-Working-Group-on-Remittance-Account-Closures-Nov-2015.pdf>. (unnumbered page)

⁷¹ Ibid.

⁷² See Ooi and Buckley, above n 42.

General's office the 'Working Group on Remittance Account Closures'. The working group agreed that '[r]emittances represent a major source of income for millions of people globally, particularly in developing economies and constitute a significant component of financial inclusion'.⁷³ It further concurred that in particular in the 'informal value transfer system' arena, the potential for criminal activity is evident. Because of the potential problem that may arise through the use of informal value transfer systems, the Parliamentary Committee recommended that 'communities should be encouraged to use registered and regulated services. It was recognised that the closure of the accounts of MTOs by ADIs could push consumers into using more IFTSs'.⁷⁴

Although informal value transfer systems ('hawala' systems) generally offer significant advantages to their users, there is for example evidence that hawala transfers have been used in terrorist financing, including the notorious attack on the World Trade Centre in 2001.⁷⁵

2.4. Public policy perspectives:

I have already pointed to some important public policy perspectives above. These include recognition of the important role of remittances on a broader societal level. In some countries, remittance income is of national interest as remittance income dwarfs formal aid and also represents a significant proportion of GDP. Individual users of remittance services would be generally not be directly affected by the broader public policy perspectives of the regulation of remittance services. Remittances are of significant public policy interest worldwide.⁷⁶

The role of remittances in the lives of individuals and communities is very important, and a matter of public policy. In particular, there has been a consistent effort internationally to not only reduce the costs of remittances, but also to ensure that users are aware of the costs involved in the remittance transaction.⁷⁷ In 2012 the Bank for International Settlements formulated 5 important principles for remittances.⁷⁸ For purposes of this paper, the following are relevant:

- 'General principle 1 – The market for remittance services should be transparent and have adequate consumer protection';
- 'General principle 3 – Remittance services should be supported by a sound, predictable, non-discriminatory and proportionate legal and regulatory framework in relevant jurisdiction'; and
- 'General principle 5 – Remittance services should be supported by appropriate governance and risk management practices'.

⁷³ Attorney-General Department, above n 70.

⁷⁴ Parliament of Australia Joint Committee on Law Enforcement, above n 69.

⁷⁵ Cook and Smith, above n 54.

⁷⁶ Australian Centre for Financial Studies, above n 9, 30.

⁷⁷ Ibid.

⁷⁸ Bank for International Settlements, Committee on Payment and Settlement Systems, General principles for international remittance services, June 2007 <http://www.bis.org/cpmi/publ/d76.pdf>. See also Bank for International Settlements, Committee on Payment and Settlement Systems, Innovations in retail Payments, Report of the Working Group on Innovations in Retail Payments, May 2012, <http://www.bis.org/cpmi/publ/d102.pdf>.

Any new or alternative remittance service would also have to measure up well against these principles.

2.5. Regulation of remittances

The key regulations of remittances come from AUSTRAC. There are strict reporting obligations on international funds transfer operators. All international funds transfer instructions, whether into or out of Australia, has to be reported to AUSTRAC within 10 business days of the date on which the instruction was sent.⁷⁹ Specific provision is made for transfer instructions given under a designated remittance arrangement (an IFTI-DRA) (typically remittance operators or MTOs), and electronic funds transfer instructions as well as international funds transfer instructions (IFTI-E) (typically banks, ADIs and persons specified under the AML/CTF Rules).⁸⁰ The purpose of the reporting of such transactions is to further the goals of the Australian AML/CTF legislation and regulation.

Australia was a leader in the regulation of informal value transfer (hawala) operators when Australia took a lead role in requiring informal funds transfer operators to register for AML/CTF reasons. The Remittance Sector Register replaced the previous Register of Providers of Designated Remittance Services in November 2011, and inclusion on the register became mandatory from 1 November 2011.⁸¹ The regulators distinguish between 3 different categories: remittance network providers, affiliate of remittance network providers and independent remittance dealers.⁸²

What is important is that AUSTRAC as regulator approves applications from institutions and controls which institutions are included on the Register or not. AUSTRAC may also suspend or cancel inclusion in the register.⁸³ Furthermore, the register is publicly available. AUSTRAC also has the power to accept enforceable undertakings from registered entities.⁸⁴ Overall this structure provides strong regulatory control and oversight.

3. From 'remittance' to rebittances: the developing Bitcoin remittance industry

In order to understand the extent to which Bitcoin remittances are different from other more traditional forms of remittance, it is useful to start with a brief introduction to Bitcoin, and how 'rebittances' work.

3.1. General introduction to Bitcoin – what is Bitcoin?

⁷⁹ *Anti-Money Laundering and Counter-Terrorism Financing Act 2006*, Chapter 7. See Australian Government Australian Transaction Reports and Analysis Centre, *International funds transfer instructions (IFTIs)*, Australian Transaction Reports and Analysis Centre Website, <http://www.austrac.gov.au/international-funds-transfer-instructions-iftis>.

⁸⁰ See Australian Government Australian Transaction Reports and Analysis Centre, above n 79.

⁸¹ Australian Centre for Financial Studies, above n 9, 32.

⁸² *Ibid*, 33.

⁸³ *Ibid*.

⁸⁴ Australian Centre for Financial Studies (principal authors Kevin Davies and Martin Jenkinson), *Remittances: Their Role, Trends and Australian Opportunities*, A study for Western Union, 2012, pg 33.

Bitcoin is virtual or digital currency.⁸⁵ It has no central issuing authority, and is created or mined through the computational solving of algorithmic problems of increasing complexity.⁸⁶ Bitcoins are created by 'the global collaborative endeavour that is Bitcoin'.⁸⁷ Bitcoin is not fiat currency,⁸⁸ and is sometimes not even classified as money.⁸⁹ Bitcoin is therefore not linked to any specific domestic jurisdiction, but is an 'international' or non-national currency. On the face of it, its non-jurisdictional or cross-jurisdictional characteristic makes it ideal as a vehicle to effect remittances across national borders. It has widely, if not always correctly, been referred to as 'an online equivalent of cash'.⁹⁰ For example, the potential benefits of Bitcoin in international transactions have been described as follows: 'Bitcoin proponents have long been eyeing one of fiat currencies' most vulnerable areas: international borders'.⁹¹ These borders, from a Bitcoin perspective, is where one currency ends and another begins; it is where 'what should be a straightforward transfer of value quickly becomes a headache—often an expensive one. Fees accrue, foreign exchange exposure looms, and regulators sniff away in the background'.⁹² Against this background (and an imaginary drumroll!) Bitcoin proponents have presented the Bitcoin solution as follows: 'Enter Bitcoin. Borderless and practically fee-free, it's the perfect solution to the torturous process of sending remittances'.

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Bitcoin is not only borderless, it is inherently valuable. As there is a finite number of Bitcoins that can be mined,⁹⁴ Bitcoins are scarce and therefore valuable.⁹⁵ Unfortunately, its value fluctuates, and one of the biggest problems of Bitcoin as a currency is that its value fluctuates significantly, making it extremely volatile.⁹⁶ The price changes over the course of a day, and may vary from exchange to exchange.⁹⁷

Another characteristic that makes Bitcoin on its face suitable for use in the remittance market is the fact that Bitcoin is non-physical and entirely an online creation. Bitcoins can be mined through an electronic computational process, or purchased with fiat currency. Most Bitcoin

⁸⁵ Michael Miller, *The Ultimate Guide to bitcoin*, QUE 2015, Pearson Education, 5.

⁸⁶ See Michael Miller, above n 85.

⁸⁷ UK Government Chief Scientific Adviser, 'Distributed Ledger Technology: beyond block chain', Government Office for Science, December 2015, 6.

⁸⁸ See Michael Miller, above n 85. See also Rhys Bollen, *The legal status of online currencies: Are Bitcoins the future?* (2013) 24 *JBFLP* 272.

⁸⁹ See for example the Australian Tax Office ruling that classifies Bitcoins as property for the purposes of taxation.

⁹⁰ UK Government Chief Scientific Adviser, above n 8, 5

⁹¹ See David Floyd, '*Bitcoin And Remittances: Can It Work?*', Nasdaq, Inc website, 3 August 2015, <http://www.nasdaq.com/article/bitcoin-and-remittances-can-it-work-cm504136#ixzz4Hv96Z8xS>

⁹² *Ibid.*

⁹³ *Ibid.*

⁹⁴ Nicholas Plassaras, 'Regulating Digital Currencies: Brining Bitcoin Within The Reach of The IMF' (2013) 14 *Chicago Journal of International Law* 377, 378.

⁹⁵ See, eg, Kevin Dowd, *New Private Monies: A Bit-Part Player?* (The Institute of Economic Affairs, 2014) 41-2.

⁹⁶ 'During March 2013 and April 2013, Bitcoin's dollar exchange rate rose from about \$50 to \$350 and then fell back to near \$70. Bitcoin's price moved up even more sharply during the fall of 2013, rising from near \$50 in September to more than \$1,100 by early December. During 2014, Bitcoin's price showed large day-to-day variations but generally trended down. By mid-January 2015, a Bitcoin was priced near \$200'. E V Murphy, M M Murphy and M V Seitzinger, *Bitcoin: Questions, Answers, and Analysis of Legal Issues* (13 October 2015) Congressional Research Service, 7.

⁹⁷ See for example Coindesk, which publishes a price for Bitcoin based on the average over 4 different Bitcoin exchanges, <http://www.coindesk.com/price/>. The price is updated continuously.

users now obtain Bitcoins from a Bitcoin exchange, by exchanging fiat currency for Bitcoins.⁹⁸ Bitcoins are generally purchased online, and Bitcoins are held in a Bitcoin wallet. Each Bitcoin user and transaction has a unique Bitcoin “identity” or “address”, and the address is generally new and randomly generated for each transaction. Each Bitcoin is therefore unique, as each Bitcoin consists of “a chain of encrypted information that records its unique transactional history”.⁹⁹

For some persons, one of the attractive features of Bitcoin is that it is not issued by any central authority, and is therefore truly private¹⁰⁰ and a ‘peer-to-peer’ currency.¹⁰¹ There is no central control over the Bitcoin network, and the only ‘control’ is exercised by the miners and ledgers of the Blockchain, which is discussed in more detail below. As Bitcoins can in some jurisdictions be purchased without going through the identification requirements of banks when a customer opens a bank account in accordance with the ‘KYC’ requirements imposed AML/CTF legislation, the real-world identity of a Bitcoin owner can therefore remain hidden. This is not the case in Australia anymore. However, the anonymity¹⁰² is often most attractive to Bitcoin users, and has contributed to some of the bad reputation that Bitcoin developed at some stage when it was predominantly associated with the anonymous online purchase of illicit drugs.¹⁰³ In reality though there is no true anonymity involved in Bitcoin transactions but rather pseudonymity. One of the key benefits of the blockchain technology that underpins Bitcoins is that it keeps a permanent and unalterable record of all Bitcoin transactions. In fact, each Bitcoin contains the hash of previous transactions, making it impossible to double-spend a Bitcoin. At this point Bitcoin has shaken off much of its earlier bad reputation, and many credible businesses and payment systems providers nowadays use Bitcoin for legal, ‘regular’ transactions.

3.1.1. The importance of blockchain technology

Bitcoin is based on blockchain technology and this technology is widely touted to be one of the biggest disrupters in the financial world.¹⁰⁴ Blockchain technology is a ‘distributed ledger technology’.¹⁰⁵ ‘A distributed ledger is essentially an asset database that can be shared across a network of multiple sites, geographies or institutions. All participants within a network can

⁹⁸ See for example operators such as Independent Reserve: <https://www.independentreserve.com/?gclid=CJu29rSK48sCFWclcgod3rYLxw>, CoinJar: <https://www.coinjar.com> and Bit Trade Australia: <https://www.coinjar.com>.

⁹⁹ D Fox, “Cyber-Currencies in Private Law” in Griffiths S, Henaghan M and Rodriguez Ferrere M B, *The Search for Certainty: Essays in Honour of John Smillie* Thomson Reuters, Wellington, forthcoming 2016.

¹⁰⁰ In Germany Bitcoin has for example been classified as a form of “private money” in a case decided in the Northern Bankruptcy Court, *Hashfast Technologies LLC v. Lowe*, Case No: 15-03011 (Bankr. N.D. Cal 2015).

¹⁰¹ The Australian Digital Currency Commerce Association *Digital currencies and Bitcoin – A proposed self-regulatory model for Australia: Submission to the Financial System Inquiry*, 29 August 2014, p 2.

¹⁰² Murphy, Murphy and Seitzinger, above n 96, 3

¹⁰³ The online supplier of illegal drugs, Silk Road, attracted a lot of attention when Bitcoin was used to obtain illegal drugs. See S Mihm, ‘Are Bitcoins the Criminal’s Best Friend?’ *Bloomberg View* (18 November 2013), <http://www.bloombergvie.com/articles/2013-11-18/are-bitcoins-the-criminal-s-best-friend->

¹⁰⁴ ‘Algorithms that enable the creation of distributed ledgers are powerful, disruptive innovations that could transform the delivery of public and private services and enhance productivity through a wide range of applications’. UK Government Chief Scientific Adviser, above n 8, 5.

¹⁰⁵ Ibid.

have their own identical copy of the ledger. Any changes to the ledger are reflected in all copies in minutes, or in some cases, seconds'.¹⁰⁶ Blockchain technology also offers superior verification possibilities, and the possibility of securely and accurately holding data.¹⁰⁷

The blockchain technology was invented in 2008 in order to create Bitcoin, and has subsequently been demonstrated to have a wide-ranging spectrum of applications and benefits. One of the benefits is the use of blockchain technology in payment systems,¹⁰⁸ as it offers a system that is harder to attack.¹⁰⁹ As there are multiple shared copies of the same database, a cyber-attack would be more difficult.¹¹⁰ Blockchain technology involves high levels of encryption, making transactions on the blockchain secure (although some hacks have been reported). Bitcoin offers a high level of security, and operates on a public-key-private-key encryption basis.¹¹¹

3.1.2. How does a Bitcoin transaction work?

Bitcoin transactions are entirely online.¹¹² There is no physical representation of Bitcoin; there is no hard currency, and no 'paper certificate' that evidences the existence or ownerships of a Bitcoin. Bitcoins can be mined anywhere in the world by a person with the necessary knowledge and computer infrastructure.¹¹³ Mining Bitcoin involves high electricity cost¹¹⁴ and special expertise and equipment, therefore Bitcoins will more likely be obtained through an exchange Australian dollars directly for Bitcoin from a Bitcoin seller or exchange.¹¹⁵

There are a number of third parties involved in Bitcoin transactions, although it is generally described as a 'peer-to-peer' network,¹¹⁶ and operates without a central authority.¹¹⁷ These third parties include Important role-players and intermediaries in the Bitcoin trading world,

¹⁰⁶ Ibid.

¹⁰⁷ Ibid, 6.

¹⁰⁸ See for example the reference to the use of Block chain in payment systems by the Reserve Bank of Australia in the Confidential Information Paper for the Payment System Board, May 2013 Meeting, <http://www.rba.gov.au/information/foi/disclosure-log/pdf/131419.pdf>.

¹⁰⁹ UK Government Chief Scientific Adviser, above n 8, 6.

¹¹⁰ Ibid.

¹¹¹ Ibid, 80

¹¹² Murphy, Murphy and Seitzinger, above n 96, 3.

¹¹³ See Australian Digital Currency Commerce Association, above n 101, 2-3.

¹¹⁴ Some reports consider the cost of mining Bitcoin to be prohibitive, for example J Quiggin, *Bitcoins are a waste of energy – literally* (6 October 2015), ABC News, The Drum, <http://www.abc.net.au/news/2015-10-06/quiggin-bitcoins-are-a-waste-of-energy/6827940>. See also: Miller above n 85, 138.

¹¹⁵ See for example operators such as Independent Reserve:

<https://www.independentreserve.com/?gclid=CJu29rSK48sCFWclcgod3rYLxw>, CoinJar: <https://www.coinjar.com> and Bit Trade Australia: <https://www.coinjar.com>.

¹¹⁶ In fact it was created to be a peer-to-peer network. See Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (2008) (unpublished white paper) <<http://bitcoin.org/bitcoin.pdf>>.

¹¹⁷ See Bollen, above n 88, 272, and The Economist, *The Economist Explains: How Does Bitcoin Work?*, (11 April 2013).

such as Bitcoin wallet service providers,¹¹⁸ Bitcoin exchanges and trading platforms,¹¹⁹ providers of payments processing for merchants selling goods or services for Bitcoin, and of course the miners. An important feature of a Bitcoin transaction is that there is no “two ledger” system as there would be where there are two banks involved. The process of oversight is effectively a process of verification. When a user issues a payment instruction, this instruction is “disseminated across the network of other users”.¹²⁰

Risks associated with Bitcoin transactions

There are some general risks associated with Bitcoin transactions that will also be present in transactions where a sender acquires Bitcoin for the purpose of remittance.

The risk in Bitcoin transactions are substantial. According to the Australian Securities and Investments Commission (ASIC), there is a ‘lot of risk’ involved for persons using or trading virtual currencies, and ‘no recourse if things go wrong’.¹²¹ The ADCC the peak industry body for cryptocurrencies, advise under the heading “Consumer Protection” on their website that consumers should be mindful of internet fraud and the need for education, prevention and awareness of safety.¹²²

Information about Bitcoin, its operation and risks, is not readily available to the general public, and requires at least some online research. Bitcoin is therefore most likely to be attractive to consumers who can also access Bitcoins and information about Bitcoins online. Unlike information about bank accounts and bank services, most information about Bitcoin is provided by the Bitcoin industry itself, including commercial exchanges or Bitcoin service providers, and is mostly not moderated by regulatory and other constraints such as the Code of Banking Practice and the applicable statutory framework.¹²³ Where Bitcoin transactions is regulated – for example if a Bitcoin remittances operator were to register with AUSTRAC and is placed on the Remittance Sector Register, information provision may be regulated by AUSTRAC.

¹¹⁸ A Bitcoin wallet stores not only a user’s Bitcoins but also their addresses, and can also store a consumer’s private keys used in encryption. Messages to transfer Bitcoins to others are generated from the Bitcoin wallet.

¹¹⁹ Bitcoin exchanges and traders provide a market where national fiat currencies can be exchanged for Bitcoins. A Bitcoin exchange would often be a consumer’s first port of call when a consumer wishes to transact with Bitcoin.

¹²⁰ R Ali, J Barrdear, R Clews and J Southgate, ‘Innovations in payment technologies and the emergence of digital currencies’, *Quarterly Bulletin*, Q3 2014, Bank of England, vol 54, no 3, 266, <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q301.pdf>.

¹²¹ ASIC warns as follows: “If you decide to trade or use virtual currencies you are taking on a lot of risk with no recourse if things go wrong.” MoneySmart *Virtual currencies* (Australian Consumer & Investment Commission) <https://www.moneysmart.gov.au/investing/investment-warnings/virtual-currencies>.

¹²² ADCCA advises generally against internet fraud and new schemes. It suggests that the best protection is self-education, on-line safety awareness and prevention. Consumers are advised not to send money to unknown persons, not to make payments on behalf of any 3rd party, to use common sense, and to remember that if something sounds too good to be true, it probably is. Australian Digital Currency Commerce Association *Consumer Protection* (Australain Digital Currency Commerce Association) <http://adcca.org.au/consumer-protection/>.

¹²³ Banks and financial institution are heavily regulated, and there is a strong and comprehensive regulatory framework that directly or indirectly protects consumers.

One of the main risks in Bitcoin transactions remain however its price volatility, and its potential for 'flash crashes'.¹²⁴ The value of Bitcoin has been known to fluctuate significantly over even very short periods of time.¹²⁵

There is also a possibility of criminal attacks on Bitcoin exchanges and user accounts, as was the case with Mt Gox, resulting in the loss of Bitcoins for both the exchange and the customer.¹²⁶ There will also always be a risk of counterfeiting, even if small.¹²⁷ Poor computer security measures implemented by Bitcoin users also pose a significant threat, as does loss of the user's private key required to decrypt its Bitcoins. Without the private key, the owner of Bitcoins is not able to transact in any way with their Bitcoins and a loss of the private key invariably results in a loss of the Bitcoins.¹²⁸ Some third parties provide wallet services and a failure of such a third party can also create loss for the owner of Bitcoins.

Bitcoin users also face a measure of regulatory risk. New legislation or regulation could result in exchanges or Bitcoin providers closing down, or transactions being outlawed or banned,¹²⁹ or additional taxes being levied resulting in potential losses for consumers. As Bitcoin operators are not confined to national boundaries, the general risks associated with cross-border transactions and in particular cross-border electronic transactions also arise for consumers. For example, Bitcoin is banned in Bangladesh.¹³⁰

3.2. Bitcoin remittances

3.2.1. How does remittances using Bitcoin work?

For purposes of this paper, sending money home using Bitcoin will be divided into two broad categories:

- (1) Direct Bitcoin transactions; and
- (2) Transactions through Bitcoin Remittance Operators.

3.2.1.1. Direct Bitcoin transactions

¹²⁴ See for example: FinanceMagnates *Volatility Returns: Bitcoin Price Plunges over 13% to 2-Month Low* (Finance Magnates) <http://www.financemagnates.com/cryptocurrency/trading/volatility-returns-bitcoin-price-plunges-over-13-to-2-month-low/>.

¹²⁵ See Reserve Bank of Australia, Submission to the Senate Inquiry on Digital Currencies, 9. There is both substantial price volatility and substantial illiquidity in the markets.

¹²⁶ ASIC has warned that in such an event there may be no statutory recourse for or protection for consumers. Australian Securities & Investments Commission, *Virtual Currencies* (26 August 2014) (Australian Securities & Investments Commission) <https://www.moneysmart.gov.au/investing/investment-warnings/virtual-currencies>.

¹²⁷ J Matonis, 'CFPB Warning Ignores Bitcoin's Consumer Protections' (CoinDesk) (18 August 2014) <http://www.coindesk.com/cfpb-warning-ignores-bitcoins-consumer-protections/>.

¹²⁸ P Vigna and M J Casey 'The Age of Crypto Currency' (Pan Books Limited, New York, 2015) 105.

¹²⁹ Bitcoin and/or bitcoin transactions have been banned in a number of countries, for example in China, financial institutions are prohibited from transacting in Bitcoin. See Bloomberg News, *China Bans Financial Companies From Bitcoin Transactions*, 5 December 2013, <http://www.bloomberg.com/news/articles/2013-12-05/china-s-pboc-bans-financial-companies-from-bitcoin-transactions>.

¹³⁰ Faisal Khan, *How Legal is Bitcoin Remittance? Faisal Kahn Money Transmitter Licensing, Banking & Processing Services website*, <https://faisalkhan.com/2015/03/12/2015310how-legal-is-bitcoin-remittance/>.

Direct Bitcoin transfers involve the user starting the remittance process using Bitcoin, sending Bitcoin from the user's own Bitcoin wallet, and the recipient receiving Bitcoin in its electronic Bitcoin wallet. Apart from the usual third parties involved such as wallet services, the transaction is direct and peer to peer.

This type of transfer would only suit users that are technologically enabled with not only access to the internet and a mobile phone. Bitcoin wallets are electronic, and Bitcoin transactions are completed wholly electronically. Such a transaction would in essence be no different to a transaction where Bitcoin is transferred to a merchant or online services provider.

The typical risks involved in this type of transaction include:

- Mistaken payments,
- Loss of Bitcoins through fraud or hacking during the transaction,
- Loss of Bitcoin through fraud or hacking of electronic wallets, and
- Loss of value because of the fluctuation in Bitcoin values.

The benefit of this type of transfer can be maximised if there is no transfer from fiat currency into Bitcoins at either end of the remittance. That would mean that the sender would already own Bitcoins, and that the recipient would spend Bitcoins without converting them into fiat currency.

3.2.1.2. Transactions using a Bitcoin Remittance Operator

There are a number of companies utilising Bitcoin in remittances,¹³¹ and there appears to be a general increase in the number of Bitcoin remittance companies.¹³² Some well-known names internationally include Abra and Rebit.

Setting up a remittance service using Bitcoin has been described as being relatively easy,¹³³ with the legality of the remittance service being perhaps the most challenging part.¹³⁴

Three broad types of remittances using Bitcoin:

- (1) Bitcoin to Bitcoin (which is similar to the type of transfer discussed above, and does not require the parties to convert fiat currency into Bitcoin or Bitcoin into fiat currency;
- (2) Fiat currency to fiat currency remittances using Bitcoins for the transfers; and

¹³¹ See Amit, '11 Money Transfer Companies Using Blockchain Technology', 23 October 2015, <https://letstalkpayments.com/11-money-transfer-companies-using-blockchain-technology-2/>

¹³² See Faisal Kahn, above n 130.

¹³³ Faisal Khan, 'How to create a remittance service using Bitcoin as a payment rail?' Quora, 1 January 2016, <https://www.quora.com/How-to-create-a-remittance-service-using-Bitcoin-as-a-payment-rail>.

¹³⁴ Ibid.

- (3) Remittances that start with the sender sending Bitcoins but the recipient receiving the payout in fiat currency.¹³⁵

Mostly, a Bitcoin remittance operator will provide blockchain-based intermediaries that offer money transfer services via Bitcoin and ‘subsequent conversion of Bitcoins back into fiat currency for withdrawal by recipients through either their mobile phones or a bank account’.¹³⁶

For example, Rebit, a large provider of Bitcoin based remittances to the Phillipines, allows senders to sign up online by creating an account with Rebit. The sender provides basic information, including a name and email address, and then uploads value from a Bitcoin wallet to the Rebit account. The basis of this service is that the sender uses Bitcoin and not fiat currency to initiate the process. If a sender does not have Bitcoins, then the sender is required to first acquire Bitcoins. The sender provides the details of the recipient and can choose the manner in which the funds are to be transferred.¹³⁷ Some of the available options are bank accounts, mobile numbers or cash pickup. See for example the ‘how to video’ on the Rebit website: <https://rebit.ph/how-it-works>. It is immediately apparent that in this model of remittance, a number of technologies have been combined, including bank account transfers, cash and mobile payments. Rebit advertises that it does not charge any fees, and only third-party fees apply for payouts to bank accounts not opened in Metro Manila and payouts using pawnshops.¹³⁸ The price of the remittance transaction is displayed in real-time (i.e. the price of the relevant charges) on the sidebar of the website to help guide senders.

Another successful Bitcoin remittance operator Abra works in a similar manner, using different technology. Abra is not yet available in Australia, but is a good example of where services providers may head in future.¹³⁹ The Abra ‘App’ is intended to do for money transfers what ‘What’s App’ did for messaging.¹⁴⁰ In particular, money can be transferred via the Abra App smartphone to smartphone, regardless of location, mobile operator or currency.¹⁴¹ The Abra App provides a digital wallet that allows users to store digital cash on their smartphone. From there, it can be sent ‘instantly to anyone else with the [A]pp. For example, an Abra user in the US can add digital cash directly to the Abra [A]pp using any major bank account. The US user can then send digital cash to any user in the US or the Philippines simply by typing in the

¹³⁵ See Faisal Khan, *Bitcoin Remittances Types of Bitcoin Remittances*, Faisal Kahn Money Transmitter Licensing, Banking & Processing Services website, <https://1dm5id4683vy49wcnj2agndu-wpengine.netdna-ssl.com/wp-content/uploads/2015/08/Funds-flow-for-Bitcoin-Based-Remittances.pdf>.

¹³⁶ IMF (authored by Dong He, Karl Habermeier, Ross Leckow, Vikram Haksar, Yasmin Almeida, Mikari Kashima, Nadim Kyriakos-Saad, Hiroko Oura, Tahsin Saadi Sedik, Natalia Stetsenko, and Concepcion Verdugo-Yepes), *Virtual Currencies and Beyond: Initial Considerations*, IMF Staff discussion note, SDN/16/03, January 2016, pg 22.

¹³⁷ On its website (<https://rebit.ph/>), Rebit explains that senders can choose between sending it directly into the bank accounts of the recipients, cash pick-up via any of the Rebit listed pawnshops (Cebuana Lhuillier, M. Lhuillier, Palawan Express and LBC) or direct pickup at Rebit head quarters in Makati. There is also an option to send the money as prepaid load (i.e. as mobile phone credit) or to pay any of the recipient’s bills.

¹³⁸ Rebit, Rebit website, <https://rebit.ph/>.

¹³⁹ iRemit is a Bitcoin remittance operator that operates between Australia and the Philippines. See: Rebit, <https://iremit.com.au/bitcoin-market-in-the-philippines-and-australia/>

¹⁴⁰ Abra, Bitcoin remittance app from Abra goes live in the US, Finextra website, 1 July 2016, <https://www.finextra.com/pressarticle/65114/bitcoin-remittance-app-from-abra-goes-live-in-the-us/innovation>.

¹⁴¹ Ibid.

recipient's phone number. Recipients in both the US and the Philippines can withdraw their digital cash to their bank account: recipients in the Philippines can also withdraw their digital cash for physical cash at an Abra Teller in their neighborhood'.¹⁴² Services are tailored to also cater for users in the Philippines who do not have a bank account.¹⁴³ Abra describes their vision as follows: 'To realize our vision of a free peer-to-peer money transfer network, we've been building a global ecosystem for person to person payments that works on any smartphone in any country in the world. While traditional remittance providers look at the world in terms of "corridors," we see the world as one big connected global network. Our blockchain based platform helps us realize that vision. Our vision at Abra is to make it possible for the first time to send money across any two smartphones regardless of location, currency, or mobile phone operator, just like WhatsApp does for messaging'.¹⁴⁴

The remittances using Bitcion are not anonymous and the details of both the sender and the recipient have to be completed in the transaction.¹⁴⁵ The transaction is effected quickly, and with applications like the Abra App, with considerable ease. The transaction can happen more quickly if the sending or receiving MTO prefunds the account. This will result in the MTO essentially underwriting the risk of the transaction.¹⁴⁶

Bitcoin, because of the distributed ledger technology, provides an advanced model of trust. The transfer of Bitcoin can be confirmed by scanning the blockchain, which keeps a permanent record of all transactions. The security of blockchain record-keeping is a distinct advantage for the Bitcoin remittance services provider.

There are however many pitfalls associated with this business model. There seems to be a broad consensus that the biggest problem with this model is the fact that recipients have to convert Bitcoins to fiat currency in order to use the remittance. If recipients were able to use Bitcoins directly or were more able to use Bitcoins directly in a market where Bitcoins were generally accepted for the type of uses to which remittance income is put, then Bitcoin-based remittances would make more sense.¹⁴⁷

From a more technical and legal perspective, it is important to note that in many Bitcoin remittance transactions, it is likely that bank accounts will still be involved, both for the Bitcoin remittance operators, as well as for the senders of Bitcoin. Whenever fiat currency is involved, it is almost inevitable that bank accounts will be used – except in obvious instances where a recipient receives cash in the foreign country. The disadvantages of the requirements for a bank account may still exist and may prevent access to remittances to some persons.

¹⁴² Ibid.

¹⁴³ Ibid.

¹⁴⁴ Ibid.

¹⁴⁵ See for example Faisal Khan, above n 135. Transaction details are exchanged and kept, including the information of the sender and the recipient, their IPs, the value of the transaction, the transaction ID, telephone numbers and other information.

¹⁴⁶ Ibid.

¹⁴⁷ See for example Floyd, above n 91.

3.2.2. Remittances through Bitcoin – the attraction and vision

For many Bitcoin protagonists, the attraction of Bitcoin lies in its peer to peer functionality, and quite possibly in the attraction of a simple transfer of value effected instantaneously on a smartphone. Visionaries see the possibility of avoiding all difficulties arising through geographical and time differences, currency conversions, the involvement of third parties, the complexities of different regulatory regimes and bank account formalities. For example, Miguel Cuneta: Co-Founder and Chief Community Officer at Satoshi Citadel Industries operating out of the Philippines, one of the key recipient countries of remittances out of Australia, is of the view that ‘the real reason Bitcoin will disrupt the remittance industry is because anyone can send \$20 or even less to anyone to anywhere in the Philippines, get it within 8 hours, even without a bank account, and still only pay 1% - 4% at the most’.¹⁴⁸ Start-ups in this area envisage that Bitcoin will soon destroy Visa and Western Union¹⁴⁹ and the banks and that in a Bitcoin remittance world there is or will be no need for regulation.¹⁵⁰

The claims of some remittance start-ups and aficionados, usually blockchain stakeholders, have however been rather sensationalist.¹⁵¹ Although it may have been hoped that Bitcoin remittances would have spread as quickly as Skype and WhatsApp as alternatives for telecommunications services did, the truth is that both the use of Bitcoin generally, and the use of Bitcoin in remittances, have not spread at a comparable speed.¹⁵² Claims by Bitcoin remittance operators of significant social utility, and benefits to socially disadvantaged groups such as women, the unbanked, or people from low economic backgrounds,¹⁵³ have not been fully demonstrated and there is some doubt about the veracity of those claims.¹⁵⁴

4. The reality: How Bitcoin remittances compare with other forms of remittances

Bitcoin remittance services may not manifest the exaggerated promises of their proponents. It should at the outset be acknowledged that the comparison below is general in nature, and depending on the specific method of remittance service used, the position may be different.

4.1. Speed

It has been suggested by the IMF that because blockchain settlement can be much faster than conventional settlement systems (one of the key reasons why Goldman Sachs has invested significantly in blockchain developments), increased speed in settlement of Blockchain

¹⁴⁸ Quoted in ‘Before you Transfer Money’ , 25 July 2016, <<https://www.saveonsend.com/blog/>>

¹⁴⁹ SaveOnSend, above n 2.

¹⁵⁰ Luis Buenaventura, ‘The Bootstrapper’s guide to bitcoin remittances’ 30 January 2015, techcrunch website , <https://techcrunch.com/2015/01/30/the-bootstrappers-guide-to-bitcoin-remittances/>

¹⁵¹ SaveOnSend, ‘Before you Transfer Money’ , 25 July 2016, <<https://www.saveonsend.com/blog/>>

¹⁵² SaveOnSend, above n 2.

¹⁵³ Ibid.

¹⁵⁴ Ibid.

remittances makes it a very attractive option for senders and recipients.¹⁵⁵ Bitcoin proponents are of the view that it will provide for faster remittances. In practice, however, unless the Bitcoin remittance is provided through mobile technology and there is either ease of conversion of Bitcoins into fiat currency, or there is no conversion of Bitcoin back into fiat currency required, it is likely that Bitcoin transfers will be slower, and it may take longer for the recipient to get cash.¹⁵⁶

4.2. Cost

It has been suggested that Bitcoin transfers would be a way to reduce the high cost of remittances. For example, the IMF is of the view that distributed ledger technology (the technology on which Bitcoin is based) can reduce the cost of remittances.¹⁵⁷ The cost of a Bitcoin remittance has been estimated by Goldman Sachs to be possibly 1 per cent, which is very attractive compared to the global average cost of sending small remittances at 7.7 per cent.¹⁵⁸ It has further been suggested that the reduction in cost can be accompanied by an increase in access.¹⁵⁹ All up though it has not been demonstrated that Bitcoin remittances will be cheaper across the board.¹⁶⁰ Even though in some remittance corridors the transaction costs with Bitcoin may be indicated to be cheaper, in some well-established large remittance corridors, other services such as traditional MTOs may still work out more economical.¹⁶¹ Online remittance in a top corridor costs about 1 – 3 per cent, while the average margin of a Bitcoin remittance is estimated to be in the region of 10 per cent.¹⁶² The average cost of Western Union transfers worldwide is 5.5 per cent, that of Ria 4 per cent, with the average weighted cost being 6.6 per cent.¹⁶³ However, given that some of the remittances from Australia are among the most expensive in the world, Bitcoin remittances may be an economical option in Australia. The cost is also very relative and not always proportionate, and in many instances even high margins result in costs that are still low in nominate terms.¹⁶⁴

It has also been pointed out that the cost of remittances is influenced by many factors, including the payments to agents. For example, Rebit still uses pawn shops from where recipients can collect their cash. A Bitcoin remittance operator may not have any inherent advantage over traditional remittance operators if similar agents have to be used, specifically if a conversion to fiat currency forms part of the remittance.

¹⁵⁵ IMF (authored by Dong He, Karl Habermeier, Ross Leckow, Vikram Haksar, Yasmin Almeida, Mikari Kashima, Nadim Kyriakos-Saad, Hiroko Oura, Tahsin Saadi Sedik, Natalia Stetsenko, and Concepcion Verdugo-Yepes), *Virtual Currencies and Beyond: Initial Considerations*, IMF Staff discussion note, SDN/16/03, January 2016, p 22. Goldman Sach has applied for a patent for its blockchain-based settlement system.

¹⁵⁶ SaveOnSend, above n 2.

¹⁵⁷ IMF, above n 155, 21.

¹⁵⁸ *Ibid*, 22.

¹⁵⁹ AB+F Australian Banking and Finance, 'Cutting overseas remittance service won't work', 25 November 2014, Australian Banking and Finance.com. <http://www.australianbankingfinance.com/banking/cutting-overseas-remittance-service-won-t-work/>.

¹⁶⁰ SaveOnSend, above n 2.

¹⁶¹ *Ibid*.

¹⁶² *Ibid*.

¹⁶³ *Ibid*.

¹⁶⁴ *Ibid*.

4.3. Volatility of Bitcoin

Perhaps the most important challenge is Bitcoin volatility and price swings.¹⁶⁵ The price volatility of Bitcoin vastly exceeds the price volatility of fiat currencies.¹⁶⁶ The effect of Bitcoin volatility may be evidenced at the commencement stage of the remittance with the sender, and again if Bitcoin is transferred into fiat currency on the recipient end. Losses are possible on both ends.

4.4. Recording of history of transactions

Blockchain offers advanced abilities to provide detailed records, and therefore Bitcoin remittances could 'enhance the scope of accounting, auditing, and supervision, especially with the growing capacity to analyse big data'.¹⁶⁷ The advantage of blockchain as a trust mechanism has been widely acclaimed.¹⁶⁸

4.5. Fiat currency conversion

Bitcoin remittances at the moment do not effectively operate without conversion to and from fiat currency both at the sender and recipient end. At the moment, very few employees in traditionally sender countries are paid in Bitcoin, therefore a conversion of fiat currency into Bitcoin is required by the sender. Similarly, in traditionally recipient countries, Bitcoins received needs to be converted to fiat currency (and usually is converted to fiat currency as a matter of course by Bitcoin remittance operators). Therefore the risk of foreign exchange losses is augmented by the risk of Bitcoin volatility. Until there is no longer a need to convert to fiat currency (for example because bills can be paid online in Bitcoin), and Bitcoins sent via remittance can be used directly, Bitcoin remittances may be less effective than traditional remittances

4.6. Online digital platforms

The benefits of mobile technology in developed and developing countries for finance purposes have been well documented. Provided both sender and recipient have equal access to mobile services or computers and the internet, online remittances offer big advantages, however these are not limited to Bitcoin remittances. The mere fact that Bitcoin remittance service providers function online is not in itself an advantage. Bitcoin startups and forward thinking companies may however develop an edge through effective user interfaces and because they are small, may be able to more nimbly respond to consumer demand. We do, after all, live in a world where it is a case of 'App über alles' – where there is an 'app' for

¹⁶⁵ Ibid.

¹⁶⁶ See Floyd, above n 9.

¹⁶⁷ IMF, above n 155, 23.

¹⁶⁸ The Economist, 'The promise of the blockchain The Trust Machine', 31 October 2015, <http://www.economist.com/news/leaders/21677198-technology-behind-bitcoin-could-transform-how-economy-works-trust-machine>.

everything. Nevertheless, Western Union has been described as being very ‘agile’ online, and capable of adjusting to current technologies quickly.¹⁶⁹ Western Union also has an ‘App’,¹⁷⁰ but still has more than half a million agent locations worldwide, from where they put cash in the hands of recipients on a large scale.¹⁷¹

The potential for innovation and digital integration is attractive in Bitcoin remittances. The use of blockchain technology has innovative potential. Traditional remittances are ultimately reliant on SWIFT for the transfers of payments.¹⁷² For example, traditional remittance operators require significant prefunding because of the relatively slow speed of SWIFT transfers.¹⁷³ In a blockchain environment the need for significant prefunding may be circumvented.¹⁷⁴

5. The Australian regulatory framework for Bitcoin remittances

In the absence of specific legislation dealing with or regulating cryptocurrencies per se in Australia, transactions for the acquisition of Bitcoins and transactions utilising Bitcoins have to be brought under the existing regulatory umbrellas, where possible.

It is often difficult to fit Bitcoin into the existing common law and statutory constructs is difficult. If Bitcoin were to fall outside of the existing protective nets, consumers may not have the otherwise generally available consumer protections that they may have expected.

Financial regulation

An acquisition of Bitcoins is not a transaction regulated as a money exchange,¹⁷⁵ and the regulatory framework for money exchangers imposed by ASIC on all foreign currency exchanges, that includes measures for consumer protection, probably does not apply.¹⁷⁶ The regulatory net does not catch Bitcoin exchanges and wallet services providers, and the consumers will not have the protection of dealing with a regulated and supervised entity under money exchange regulation.

In the opinion of ASIC, Bitcoin is not a financial product¹⁷⁷ and does not fall within the definitions of a “financial product” in the Corporations Act¹⁷⁸ or the *Australian Securities and*

¹⁶⁹ SaveOnSend, above n 2.

¹⁷⁰ See Western Union website, <https://www.westernunion.com/au/en/home.html>.

¹⁷¹ Western Union, Our Vision, Western Union Website, <https://corporate.westernunion.com/our-vision.html>.

¹⁷² SaveOnSend, above n 2.

¹⁷³ Ibid.

¹⁷⁴ Ibid.

¹⁷⁵ See the conclusions and discussion in: The Senate, Australian Federal Government, ‘Digital currency—game changer or bit player’ Economic References Committee, The Senate, Australian Federal Government, August 2015 p 40, http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency.

¹⁷⁶ See Senate, above n 175

¹⁷⁷ Ibid 39.

¹⁷⁸ *Corporations Act 2001* (Cth), s 763A.

*Investments Commission Act 2001 (Cth) (ASIC Act).*¹⁷⁹ The protections imposed by regulation for the provision of and trading in financial products or the provision of financial services do not protect persons acquiring Bitcoin.¹⁸⁰

There are however two exceptions to the general position that entities selling, holding or providing Bitcoin do not have to comply with the extensive regulatory framework of financial services providers. First, if regulated financial institutions were to include Bitcoin among their products, it would be considered a financial product¹⁸¹ and the regulatory protections would also apply.¹⁸² Therefore, any regulated entity that already provides services that are caught under this legislation, including financial institutions providing cross border remittance services, and were to extend their product offerings to include Bitcoin remittances, would be subject to the regulations applicable to financial products. Bitcoin remittance operators may also be caught under the second exception. The second applies to a facility that allows for the conversion of Bitcoins in a Bitcoin wallet to fiat currency (for example on a bank card e.g. an eftpos or direct debit card) will be regulated as an intermediary facility under the Corporations Act and/or the ASIC Act.¹⁸³ Further non-cash payments are a type of financial product and this type of digital currency intermediary facility may also require an Australian financial services licence.¹⁸⁴ It was however the opinion of the Senate that in many instances transactions for the acquisition of Bitcoins will not fall within the regulatory framework of financial products or financial services.¹⁸⁵

Consumer regulation

In addition, acquirers of Bitcoins may benefit from protection under the *Australian Consumer Law (ACL)*.¹⁸⁶ If the actions of a Bitcoin exchange or a Bitcoin wallet services provider is determined to constitute actions of a “corporation”,¹⁸⁷ and the conduct complained of by the

¹⁷⁹ *Australian Securities and Investments Commission Act 2001 (Cth) s 12BAA.*

¹⁸⁰ See Senate above n 175,39.

¹⁸¹ Ibid 43: ‘For example, PayPal recently entered into an agreement with leading Bitcoin payments processors Bitpay, Coinbase and GoCoin, to enable its merchants to accept Bitcoin. In this instance, the usual financial services licensing, conduct and disclosure obligations for financial products in the Corporations Act apply’.

¹⁸² There may however be some difficulties. The decentralized framework on which Bitcoin operates would mean that even if the definition of financial products under the *Corporations Act* and the *ASIC Act* were to be extended to digital currencies such as Bitcoin, ‘the normal obligations on product issuers [could not] be imposed’: Senate, above n 175, 41. For example, if digital currency were to be included in the financial services regulatory regime, product disclosure obligations may need to be tailored to clarify that digital currencies do not have an identifiable ‘issuer’: Senate, n 175, 41.

¹⁸³ Senate, n 175, 43. “An example of this kind of facility is the recently announced CoinJar Swipe card, which allows CoinJar customers to convert the value in their CoinJar Bitcoin wallet to Australian dollars loaded onto an EFTPOS card.”

¹⁸⁴ Another example where Bitcoin may fall under the existing regulatory framework for financial services, is the framework relating to intermediary facilities. In ASIC’s opinion, where intermediary facilities for paying for goods and services are ‘providing a facility through which non-cash payments are made in digital currency, regardless of whether the merchant accepts digital currency’, that facility may constitute a ‘financial service’ and be regulated under the *Corporations Act* and/or the *ASIC Act*. See: Senate, n 175, 43.

¹⁸⁵ Senate, n 175, 43.

¹⁸⁶ *Australian Consumer Law 2010 (Cth)*.

¹⁸⁷ *Competition and Consumer Act 2010 (Cth) s 4(1)*.

consumer may be imputed to that corporation,¹⁸⁸ consumers may have recourse to the statutory remedies under the ACL in the event that, for example, a Bitcoin exchange were to have engaged in misleading or deceptive conduct (as determined under ACL s18), or had made a false representation (as per ACL s22). The consumer guarantees under the ACL Ch 3 Pt 3-2 Div 1 will apply to the transaction to acquire Bitcoins (presuming that all other relevant requirements of the ACL have been met)¹⁸⁹ if the Bitcoins satisfy the threshold definition of “goods” or “services”. It is unlikely that Bitcoins will be considered to be goods under the ACL, because even though software is expressly provided for as ‘goods’, Bitcoins are not ‘software’. It may be possible to classify Bitcoins as ‘services’ under the definition in the ACL. This would not be completely out of place given that bank notes have been considered to be services.¹⁹⁰ Provided then that the ACL applies, a sender in a remittance transaction that acquires Bitcoins for purposes of remittance, would have some consumer protection available under the existing frameworks. However, although remedies such as damages and compensation orders may be available, these remedies are not without risk of falling short of being completely compensatory because of Bitcoin’s price volatility and the fact that compensation will be ordered in fiat currency (Australian dollar). There are some general difficulties with remedies that involve breaches of contract for the supply of Bitcoins. These difficulties include inherent problems in orders in the nature of specific performance, whether either damages could be held to be adequate, or where an order would be barred on discretionary grounds because of the unique single-use nature of Bitcoins. Lastly, the fact that Bitcoins are both unique and a Bitcoin transaction is irreversible,¹⁹¹ also means that there will be difficulties with all restitutory remedies where a return of the item is ordered, and restitution as a remedy may therefore be denied for impossibility.

AML/CTF

One of the key changes in the Australian regulatory framework is the recent decision to extend the AML/CTF regulations to include digital currency businesses, such as Bitcoin exchanges and Bitcoin remittance operators. As a consequence, appropriate safeguards will be in place that will assist in supporting growth in the Bitcoin (and other cryptocurrencies) industry. In addition, the ADCCA has also developed an Industry Code of Conduct that will boost confidence in the services of members of the ADCCA. It is anticipated that difficulties with the KYC requirements under the AML/CTF regulations will be overcome and that bank account services will be provided to Bitcoin operators.¹⁹²

¹⁸⁸ As required under the sections intended to overcome difficulties: *Competition and Consumer Act 2010* (Cth) s 84(2) and *Competition and Consumer Act 2010* (Cth) s 139B(2).

¹⁸⁹ Such as for example that the acquirer of the Bitcoins must satisfy the ACL’s requirements to qualify as a consumer for the purposes of the ACL.

¹⁹⁰ See *Sykes v Reserve Bank of Australia* (1997) 151 ALR 579, 592. This decision was in relation to s 52 of the precursor of the ACL, the *Trade Practices Act 1974* (Cth).

¹⁹¹ Miller M, n 85.

¹⁹² Australian Digital Currency Commerce Association, ‘Digital currency businesses welcome Treasurer’s Fintech statement’, Press Release, 21 March 2016, <http://adcca.org.au/wp-content/uploads/2016/04/ADCCA-PR-Fintech-210316.pdf>. The ADCCA stated: ‘The AML/CTF changes along with the self-regulatory Industry Code of Conduct, will be especially important in ensuring that banks can easily confirm the adherence of digital currency businesses to best practice standards and thus allow them to confidently extend transactional banking services to the sector. ...ADCCA welcomes these changes and looks forward to working with Government, regulators and

As mentioned earlier, remittance services providers are required to register with AUSTRAC, and users of remittance services through Bitcoin will also stand to benefit from AUSTRAC's oversight and regulation of the industry.

The Currency Act 1965 (Cth)

It is a stipulation in the Currency Act s 9¹⁹³ that transactions are to be effected in Australian dollars.¹⁹⁴ The effect of this stipulation on Bitcoin remittances is not really clear and it is not clear that a 'Bitcoin remittance' would constitute a transaction for purposes of the Currency Act.

6. Perks and pitfalls – solutions? Concluding remarks

In the area of remittances, at a high level, a balance should be struck between individual and collective interests. In many instances, protective legislation and regulation is seen to be prohibitory in nature. Buckley and Ooi however raise important arguments and point to the need for not just prohibitory legislation but also enabling legislation. In particular, they cite the potential need for legislation that will 'encourage banks to participate in socially responsible behaviour'.¹⁹⁵ Enabling legislation in the area of Bitcoin remittance should also go further than merely making it possible for Bitcoin remittance services to have bank accounts. Enabling legislation will allow competitive remittance streams to develop, and will allow operators in this area to use and develop promising new technology such as blockchain. There is a real potential for efficient Bitcoin remittances, even if at the moment the take-up is not very high, and even if at present the industry is still developing.

Bitcoin remittances and their potential should be compared to the relevant principles set by the BIS for remittances, as referenced earlier in this paper. They are:

- 'General principle 1 – The market for remittance services should be transparent and have adequate consumer protection';

the banking industry to finalise the detail of these initiatives to support the growth of a key component of Australia's Fintech future.

¹⁹³ *Currency Act 1965* (Cth) s 9: 'Transactions to be in Australian currency

(1) Subject to this section, every sale, every bill of exchange or promissory note, every security for money, and every other contract, agreement, deed, instrument, transaction, dealing, matter or thing relating to money, or involving the payment of, or a liability to pay, money, that is made, executed, entered into or done, shall, unless it is made, executed, entered into or done according to the currency of some country other than Australia, be made, executed, entered into or done according to the currency of Australia provided for by this Act.'

¹⁹⁴ Bitcoins may be treated as tokens for value in legal tender. At times trade dollars and even chocolate wrappers were considered to be representative of value.

¹⁹⁵ See Ooi and Buckley, above n 42.

- ‘General principle 3 – Remittance services should be supported by a sound, predictable, non-discriminatory and proportionate legal and regulatory framework in the relevant jurisdiction’; and
- ‘General principle 5 – Remittance services should be supported by appropriate governance and risk management practices’

Bitcoin remittances compare positively to these principles.

In Australia, there is consumer protection that may cover consumers in the process of acquiring Bitcoin, and because Bitcoin remittance operators will be required to register for purposes of AML/CTF regulation, there will be regulatory oversight of AUSTRAC over Bitcoin remittance operators. Transparency can be ensured through regulatory measures and requirements. The Australian government has painted itself as a proponent of developments in blockchain technology, and has demonstrated support for financial development, including in the blockchain arena. Australia also has an interest in the effect that problems in the remittance sector may have not just on migrant workers in Australia and their families abroad. It is also concerned, from a larger policy perspective, about stability in certain countries in the Pacific in strategic areas that could be affected by problems in the remittances sector.

Whilst Bitcoin remittances are not the panacea of remittances, it can be one of a number of effective remittance streams that could assist all role players in achieving their objectives: well-regulated, safe and appropriately documents remittances effected in a practical and cost-effective manner.

Table 1 Comparative table of methods of sending money home

(This comparative table compares a number of relevant characteristics of the different forms of remittances. However, users will probably mostly be concerned with risk, speed, convenience, complexity and cost.¹⁹⁶)

	ADIs, Banking sector Bank account to bank account “bank draft” or “bank transfer”	MTO – Money Transfer Operator (Corporate Intl Fund Transfer Operator), “wire transfer”	Informal fund transfer (Hawala)	Physical money (cash) transfer (cash mules)	Bitcoin Remittances
Who and how	Banks	Western Union MoneyGram Dahakshill ¹⁹⁷ (Aus to India)	Hawala	Person carrying cash	Apra, Rebit, numerous start-ups and smaller companies
Best for ..	More than USD 5,000	USD 1,000 – 5,000 ¹⁹⁸	Small amounts	Small amounts	Potentially small amounts, technically any amount
Legal classification	Under Austrac regulatory framework – IFTI-E (International Funds Transfer Instructions Electronic) From ordering institutions to beneficiary institutions; in between them is sender/transmitter, and interposed institution	Under Austrac regulatory framework – IFTI-DRA Remittance company in Australia arranges with remittance company in foreign country for money to be made available to recipient in foreign company; settlement between companies done in variety of ways. Can also involve the use of banks to transfer funds from sender’s services provider to recipient’s provider.	Under Austrac regulatory framework – IFTI-DRA	N/A	Under Austrac regulatory framework – IFTI-DRA

¹⁹⁶ Australian Centre for Financial Studies, above n 9, 7.

¹⁹⁷ David Rees, Money laundering and terrorism financing risks posed by alternative remittance in Australia, 2010, AIC Reports Research and Public Policy Series No 106 for Australian Government, Australian Institute of Criminology, http://www.aic.gov.au/media_library/publications/rpp/106/rpp106.pdf.

¹⁹⁸ Australian Centre for Financial Studies, above n 9.

Level of technology – low to high	Moderate to high tech but accessible in low tech manner	Moderate to high tech; accessible in low tech manner	Can be low tech; sometimes moderate tech	Low tech	Moderate to high tech; accessible in low tech manner
Controls, safety, trust	High levels of control and trust through technology and regulation	High levels of control and trust through technology and regulation	Based on personal trust, personal knowledge, often word of mouth recommendations	Based on personal trust, personal knowledge	High levels of control and trust through technology and regulation
Risk levels	Low	Low	Low to moderate	Higher ¹⁹⁹	Likely to be low
How safe is it	Safe	Safe	Not many complaints – measures of control are ‘personal’	Clandestine	Probably quite safe
How are funds transferred	Electronic transfer of fiat currency; could cash out fiat currency. Money can go across borders, or correspondent banking arrangements may be used.	Electronic transfer of fiat currency; could cash out fiat currency. Money can go across borders, or arrangements fairly similar to correspondent banking arrangements may be used.	No money generally goes across borders	Physical money goes across border	Electronic transfer of Bitcoins with involvement of bank accounts in many instances for transfers from and to fiat currency.
Where	Countries with banking infrastructure ²⁰⁰	Countries with poor financial services infrastructure ²⁰¹ but not exclusively so.	Countries with poor financial services infrastructure	Anywhere	Everywhere, but not legal everywhere, and not equally useful everywhere
Speed	One to three days ²⁰²	Virtually instantaneous ²⁰³	Varies	Varies but can be quick	Virtually instant or up to 3 days.
Need for a bank account	Yes ²⁰⁴	No ²⁰⁵ But according to a study, most users of ‘cash-to-cash’ remittance systems actually have bank accounts. ²⁰⁶ The advantage of cash-to-cash transactions is	No	No	Frequently but not in principle.

¹⁹⁹ Ibid, 32.

²⁰⁰ Ibid, 1.

²⁰¹ Ibid.

²⁰² Ibid.

²⁰³ Ibid.

²⁰⁴ Ibid.

²⁰⁵ Ibid.

²⁰⁶ Ibid, 22

		speed and simplicity.			
Regulated	Yes	Yes	Now also regulated under AML CTF	Generally these informal services do not comply with reporting standards and the information is not captured. Legal framework is general crime, tax, foreign exchange regs; also transaction reporting Ingenious ways of dodging regulations – gifts etc	Now also regulated under AML CTF
Bank account or cash to originate remittance	Bank account	Cash or bank account	Cash or bank account	Cash or bank account	Bank account or Bitcoin wallet
Third parties involved between sender and receiver	Banks	Corporate Remittance services providers Funds Transfer Operators	Informal Funds Transfer Operators	Individuals	Wallet services providers, Bitcoin miners, Bitcoin remittance providers