

# Coining a new currency



MARK ABRAMOVICH reports on the rise of the digital currency called Bitcoin and asks whether super funds should be investing in it.

**B**itcoin has sparked widespread fascination, capturing the interest of basement bloggers and savvy investors alike. But what is it and is Bitcoin an asset that superannuation funds should start investing in, or at least consider? Could chief investment officers use it as another form of currency or currency hedge? Or is it just too risky and inherently dangerous to even consider?

## WHAT IS BITCOIN?

Bitcoin is a digital medium of exchange. It uses peer-to-peer technology to operate a payment system, creating a digital currency without the need for banks and without a regulatory authority. Managing transactions and the issuing of Bitcoins is carried out by the network collectively, and the creation and transfer of Bitcoin is controlled by cryptography (the process of making information unreadable – encrypting it – except to those with the key to decipher it).

Essentially, Bitcoin is created by software, via a process called 'mining', where the money supply is automated and given to servers known as Bitcoin 'miners'. These miners maintain a 'block chain' that records current Bitcoin ownership, and, in return, they are rewarded with newly-minted Bitcoins – 25 per block. This is different to actually purchasing Bitcoins: rather than

buying the currency, miners solve algorithms and hence 'earn' Bitcoins.

There is, supposedly, a finite number of Bitcoins, and, after 2141, the total number of Bitcoins in 'circulation' is meant to remain fixed at 21 million. However, as the currency is still in its infancy, this remains to be seen.

## CAN YOU BUY BITCOINS?

The answer is yes. A quick Google search will reveal numerous websites that allow you to establish a Bitcoin 'wallet' on your computer. By all accounts, this is really a collection of encrypted public and private digital tags or 'keys' (a pin code): A transaction transfers ownership of these digital tags to a new address, which is then verified by another key.

As Bitcoin is a digital currency only, there are no physical coins. Instead, there are only records of transactions between different addresses, with balances that increase and decrease. Transactions are publicly available to view, and transaction histories can be traced.

## HOW DO YOU MAKE A TRANSACTION?

There are three pieces of information required for either the transfer of Bitcoins to an individual, or the use of Bitcoin to pay for a service:

- an input: this is a record of the Bitcoin

address used to send the Bitcoins to the person/organisation

- an output: this is the receiver's Bitcoin address
- the Bitcoins to be paid.

This is where the Bitcoin address and private key come into play. These are randomly generated and appear as a sequence of numbers and letters. The Bitcoin address is publically available, but the private address is kept confidential. As one commentator wrote: "think of your Bitcoin address as a safety deposit box with a glass front. Everyone knows what is in it but only the private key can unlock it".

The transaction is then sent from the wallet to the wider network, where Bitcoin miners verify the transaction, adding it into the Bitcoin chain or 'transaction block'. As the transaction is simply a code of data, the payer is anonymous, but everyone in the network can see the transaction. The difficulty for regulators and central banks is that there does not need to be a central clearing facility.

## BITCOIN ATMS

Believe it or not, there are a few Bitcoin automatic teller machines (ATMs) working in certain countries. One of the first was in Vancouver, Canada, which allowed users (after checking their handprint no less) to withdraw actual Canadian dollars with the

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## BITCOIN AROUND THE WORLD

Which countries recognise or regulate Bitcoin?

- » **Brazil:** gains made on Bitcoin transactions are taxable as capital gains, but it does not classify Bitcoin as a currency.
- » **Germany:** will not recognise Bitcoin as a foreign currency or digital money, but will legalise it as a private money so that it is subject to taxation.
- » **Switzerland:** Bitcoin is in the research phase only.
- » **Norway:** will not recognise it as a currency, but will classify it as an asset subject to capital gains tax and sales tax.
- » **China:** China's central bank, the People's Bank of China, ordered the country's commercial banks and payment companies to close Bitcoin trading accounts by mid-April this year, dealing another blow to the virtual currency.
- » **South Korea:** has rejected Bitcoin as a legitimate currency.
- » **United States:** has had some Senate hearings in which the Department of Justice has stated that Bitcoins can be a "legal means of exchange", but is still investigating the risks associated with virtual currency.
- » **Australia:** does not recognise Bitcoin as a currency, but as stated, the ATO will tax it if there is a capital gain.

corresponding amount being debited from their virtual Bitcoin wallets. Other ATMs simply convert your actual currency into Bitcoins after you deposit real currency, United States dollars for instance, into the ATM. The user then logs into their Bitcoin account via their mobile phone to view the transaction. Some even use quick response (QR) codes for verification.

Cryptex Card, a Hong-Kong based startup, has started an online service that quickly exchanges Bitcoins into dollars by loading them onto a card that can be used at ATMs. The card will function as a prepaid debit card, and can be issued through a license with Union Pay – a Chinese bank card provider – and it is accepted by many outlets around the world.

On 15 April 2014, the first two-way Bitcoin ATM opened in the Westfield Sydney Central Plaza shopping centre, allowing customers to buy and sell Bitcoins from their Bitcoin wallet. The ATM is operated by a company called ABA Technology, and it has plans to have 100 Bitcoin ATMs in Australia by 2016.

### HOW ARE BITCOINS VALUED?

As yet, there appears to be no central valuation mechanism, and the currency's price appears to be solely centred on supply and demand. It behaves like the equity markets, with the price dropping almost US\$500 in an hour, and then

regaining its value within a similar timeframe. Its value appears to rise and fall on the strength of its network, and hence, one can assume the price rises when more people use or buy Bitcoins for goods and services, or even via speculation.

The Australian Taxation Office (ATO) has recently given notice to those who trade Bitcoins, informing them that it will crack down on any undisclosed capital gains. In light of this, the attribution of value is interesting, as this is yet to be a recognised currency. Clearly, the conversion on recognised currency has the ATO's attention.

### GOODS, SERVICES AND BITCOINS

A number of retailers and organisations across the world are starting to accept Bitcoins for the payment of goods or services, creating the need for special tracking mechanisms to be used by governments to trace revenue and profit. There are lists on the internet detailing merchants who accept Bitcoins, including some Australian mentions, though the number is limited at this stage.

Unfortunately, with the rapid fluctuation in the price of Bitcoin may come pressure on vendors to rapidly adjust their prices to accommodate the current valuation. However, this cannot be predicted with complete certainty – goods may be simply valued in Bitcoin. While there are reports

that stores in the United States (US), such as Walmart, Target and Nike, are accepting Bitcoin gift cards, research suggests that, at this point in time, most retailers accepting Bitcoin are online.

### SHOULD SUPER FUNDS INVEST?

The Bitcoin phenomenon is not without its own scandals, and the currency poses potential risk-management nightmares. For example, in February 2014, Mt. Gox, a Bitcoin exchange based in Japan, filed for bankruptcy after "losing" 850,000 Bitcoins, worth around US \$473 million. The coins were allegedly stolen from the exchange's accounts by hacking attacks, and though 200,000 of the lost coins have since been rediscovered, it's unlikely any more will be found. The company's chief executive officer, Mark Karpelès, has been ordered by the Financial Crimes Enforcement Network (part of the US Department of Treasury) to attend a hearing in Washington to account for what went wrong.

After considering the pros and cons of the fledgling currency, should super funds invest in Bitcoin? At this point in time, one could safely say no. However, this will not always be the case, especially if Bitcoin is internationally recognised as a legitimate and regulated form of currency (that is, if it gains legal tender status).

At this stage, we can safely assume that APRA would not say that such an investment, or use of the technology, would pass the governance tests required under the new prudential standards, or indeed be considered under the prudential practice guides.

However, once Bitcoin does become regulated internationally, and its transactions are tracked and taxed appropriately, then there would be nothing legally prohibiting super funds investing in it, using it as a currency hedge, or even paying for goods and services with it. Obviously, there must be price stability, though consider the currency fluctuations that funds deal with now. There must also be increased security and traceability for prudential, investment governance, taxation, anti-money laundering and reporting purposes, but this is a space to watch. **SF**

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