Crypto: Can it Ever Be Right for Treasury?

n an era where arguably even normally dependable gilts have shifted from being 'risk-free returns' to 'return-free risks', have cryptocurrencies such as Bitcoin finally become viable assets? Or has recent market turbulence, coupled with regulatory intervention, put a stop to treasury interest in this space? We explore the options – and take a pragmatic view.

By Tom Alford, Deputy Editor

Cash is king. Cash is dead. They can't both be right. The 'cash dead' school of thought is often based on the belief that a digital asset, most commonly Bitcoin, is the best alternative. The investment potential of Bitcoin is well known and often characterised as a rollercoaster ride. In recent months it has certainly attracted attention, not all good.

Up to the end of April 2021, Bitcoin received investment flows of \$3.7bn, according to CoinShares. Its appeal appeared to be widening. With huge allocations by high-profile firms such as MicroStrategy, Tesla and Square, which together have bought \$3.9bn worth, Bitcoin seemed to be coming of age in early 2021 – even if its most notable proponents were cash-rich tech firms with visionary founders holding relatively high percentages of board control.

Nevertheless, Bitcoin – and other cryptocurrencies – are subject to unexpected market pressure. A prime example of this is the move by Chinese regulators in mid-May 2021 (the time of writing) to ban financial institutions and payment providers from offering services related to cryptocurrency transactions. Investors in China were also warned against speculative crypto trading. Understandably, this news caused the value of Bitcoin to plummet and the currency has lost approximately half of its value in just 30 days.

This was followed in late May by an announcement from the Chinese State Council's Financial Stability and Development Committee that China will crack down on bitcoin mining and trading activities as part of efforts to fend off financial risks. Further losses followed, although several major mining concerns were reported as investigating operational moves 'overseas'.

The regulatory setback was unfortunately timed, coming just after Tesla's recent back-pedalling on accepting the currency as payment until such a time as coin mining shifts to a more planet-friendly means. The reason for Elon Musk's change of view is simple. Bitcoin's rise has been in parallel with that of sustainabilityinformed investing. This has exposed an incompatibility that may not be resolved any time soon.

The increasingly vast computing power needed to 'mine' bitcoins consumes an equally vast amount of electrical power to run and cool the computers. With at least 75% of all the world's bitcoin-mining power centred in China, where fossilfuelled power stations account for almost two thirds of power production, serious ecological concerns are being raised.

The Global Times has reported that annual energy consumption by bitcoin mining in China is expected to peak in 2024 at 296.59 Twh, and generate 130.50m metric tons of carbon emission (about the same as the whole of the Philippines). The research was carried out jointly by the Chinese Academy of Sciences and Tsinghua University.

Chris Clothier, a fund manager at CG Asset Management, is quoted on the Institutional Asset Manager website as saying that "investors with any consideration for ESG principles should avoid" investing in bitcoin. "Bitcoin is nothing short of an environmental catastrophe."

Globally, bitcoin mining's carbon footprint is huge. As demand soars, and computing power-consumption rises in parallel, it has been estimated that bitcoin's CO2 production could soon triple. Coal-fired power consumption at scale is environmentally destructive; the pressure on Tesla to take a revised stance – at least on accepting bitcoin as payment, not holding them – may see others follow suit. With Tesla's statement immediately costing Bitcoin 10% of its value, the sustainability issue is not to be ignored.

Bitcoin mining resources will at some point have to change. But could it even encourage the use of renewable energy sources, as some have suggested? Projects such as the Bitcoin Clean Energy Initiative are advancing the idea that bitcoin mining could add momentum to the transition to renewable power. By acting as a flexible consumer of renewable energy, which is only produced under certain conditions (daytime for solar power, for example), miners can absorb excess grid power, reducing renewable production costs. Not all buy this notion. In a FT opinion piece, Jamie Powell takes issue, mooting the idea that this is just the voice of selfinterested bitcoin promoters being raised in response to environmentalist attacks. Bitcoin Clean Energy Initiative is run by committed bitcoin investor, Square, he notes.

It's a way, Powell said, of "trying to justify, after the fact, bitcoin's insane energy use", as a means of "guarding against people going off crypto on the grounds that it is actually a Very Bad Thing". Protecting bitcoin's value is one thing, but then telling China's miners (wherever they eventually locate themselves) to only use renewables is an altogether more interesting undertaking.

Kicking off an eco-debate that will see people strongly take sides may not suit most corporate treasury sensibilities, or that of their wider corporate ESG policy. Such issues cannot be dismissed, but bitcoin is nonetheless an interesting asset in the face of cash's current woeful performance.

Cash decline

While Bitcoin's maturation carries with it some worrying growing pains, the idea of large cash holdings on the books has been losing rather a lot of its shine. Bitcoin's rising investment star may even be more about cash's decline than its own special qualities, suggests Josh Deems, Director of Business Development, Fidelity Digital Assets. "Many corporates are in an economic environment where they are looking at cash on their balance sheet and thinking it could be worth less tomorrow than it is today. It's becoming an expensive holding," he says.

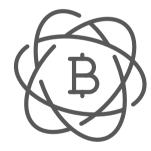
Indeed, using cash in a market where costs are rising means having to make that money work harder just to keep up. In today's challenging environment for interest rates, decent returns have all but disappeared.

Jeff Dorman, Chief Investment Officer, Arca, wrote in a recent blog that for a large corporate, cash holdings require multiple banking partners, incurring multiple fees for a wide range of transactions (not least foreign exchange), and still they are subject to frequent settlement delays. The "onerous" nature of cash holdings, he argues, is driving interest in alternatives such as Bitcoin.

This is not to detract totally from Bitcoin's recent stellar performance,



Director of Business Development, Fidelity Digital Assets



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says Deems. "The reason why Bitcoin is becoming one of the most attractive alternatives is that it has gone through an incredible cycle in the past year," he notes.

Rising interest

In 2020, a Bitcoin supply crunch emerged. Demand grew so much that it outstripped the newly mined supply. It has an absolute maximum production of 21 million bitcoins embedded in its source code so, unlike gold, it has a known finite production run. As asset prices always come down to simple supply and demand, and Bitcoin demand is now outstripping demand, major investors are on the case, including key hedge fund manager Tudor Investments, which ploughed in around \$425m in May 2020.

It's not much more than a 1% drop in Tudor's current \$38bn assets under management (AUM) ocean. But for a 'traditional' player to engage at this level as a hedge against inflation, Deems argues that Bitcoin is taking on the characteristics of a hard asset capable of mitigating against the uncertainties of global economics.

And yet 84% of corporate finance respondents to a February 2021 Gartner survey said they did not plan to ever hold Bitcoin as a corporate asset. With the demand for traditional assets post-pandemic (mindful of activist-led assaults on equities as per GameStop, and the changing nature of commodities appetites globally) perhaps denoting market turbulence ahead, it may be time for re-assessment.

Fidelity research suggests an allocation of 2% to 3% Bitcoin can outperform, on a risk-adjusted basis, a traditional 60% equities/40% fixed-income portfolio. J.P. Morgan recently weighed in, saying investors could allocate up to 1% of their portfolio into Bitcoin as a hedge for other asset classes. In 2020, Bitcoin returns were many times that of the S&P 500 Index and gold, pitching 160.40% versus 13.73% versus 21.60% respectively, according to CoinDesk figures. With the right market backdrop, there is now what Deems calls "a supporting precedent" for investment.

As such, to the list of Bitcoin-investing tech-driven businesses such as MicroStrategy, Square and Tesla, and more risk-inclined players like Tudor, can now be added traditional fund managers such as Mass Mutual, and Harvard, Yale and Brown university endowments, all of which made sizeable allocations in 2020. There are many other examples but the impact of the environmental issue around mining may yet temper some investor enthusiasm.

Gaining traction

Bitcoin is a unique digital asset in that it can be held as a balance sheet investment and as operational capital. In an increasingly digital world, arguably it offers a good fit. While synchronised global regulation of Bitcoin is unlikely, the fact that it has no single controlling entity can be perceived as a strength: no one can exert influence over its production or value.

That said, while individual governments will always want to understand how and where money is flowing through the system, there's a higher level of understanding of crypto among individual regulatory bodies now – in the US, for example, the new head of the Securities and Exchange Commission, Gary Gensler even taught digital assets and blockchain at Massachusetts Institute of Technology.

At a technological level, compliance concerns around anti money-laundering can be mitigated by the historical provenance attached by blockchain to every Bitcoin transaction. Harry Hughes, Chief of Staff at Equos digital currency exchange provider Diginex, notes that every cryptocurrency move is traceable in a way that no cash deal could ever be. This is as a result of tech firms such as Chainalysis, Coincensus and Elliptic providing government agencies, cryptocurrency businesses and financial institutions with a common understanding of how cryptocurrencies are being used.

It has recently been reported by Chainalysis that a group of just 270 blockchain addresses have laundered around 55% of cryptocurrency associated with criminal activity. The report added that 1,867 addresses received 75% of all criminally-linked cryptocurrency funds in 2020, a sum estimated at around \$1.7bn. Chainalysis describes this "bottleneck in money laundering" operations as "good news". The squeeze is on.

Arguably even the concept of 'dark coin' – cryptocurrencies designed to provide secure and private transactions, primarily to evade



Chief of Staff at Equos digital currency exchange provider Diginex

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government agency observation – has an upside. His view is that the emergence of a dark side means criminals now see the irrefutable blockchain trails of 'regular' crypto as too much of a risk, leaving the space clear for legitimate use.

This is also good news for commercial adoption. In the context of global supply chains, where even large retailers are starting to hold Bitcoin on balance sheet (Walmart is rumoured to be allocating up to \$1bn), currency instability in certain territories can be safely mitigated by Bitcoin, explains Hughes.

Even if a business runs a USDdenominated book, local currency volatility can cause huge pricing fluctuations. It's feasible that demand for taking payment in Bitcoin, or even fiat-backed Stablecoin (see box below), will rise because crypto assets are not subject to debasement associated with unsustainable fiscal and monetary policies.

Another reason cited by Hughes is because crypto assets are highly portable, unlike the other alternative means of hedging against fiat currency inflation: gold. That said, even this now has a solution, offered by Kinesis (and reported online by TMI *treasury-management*. *com/blog/digital-gold-creating-yield-fortreasurers/*) to enable people in Indonesia to buy and transact with a blockchainsupported digital representation of physical gold bullion.

But treasurers need to go beyond managing pricing volatility and know your customer/anti money-laundering (KYC/ AML) concerns. As part of a diversified treasury cash strategy, Bitcoin investment raises issues around taxation and accounting treatments, for example, not least because clear and consistent rules for each are yet to be determined.

Bitcoin vs tax and accounting

As a starting point, Deloitte's "Corporates investing in crypto: considerations regarding allocations to digital assets" helps steer treasurers through their initial explorations of digital asset holdings – and presents the issues for all to see.

According to co-author, Rob Massey, Partner, Global & US Tax Blockchain & Digital Assets Leader, Deloitte Tax, those holding Bitcoin as an investment must recognise that tax treatment varies according to different authorities around the world.

"In most jurisdictions, it is viewed differently than other investment type assets in that it is deemed 'general property' and fungible," he explains. "Bitcoin requires a higher degree of operational care to segregate tranches of investments with varied basis in order to identify which is sold, the associated basis, and the resulting gain."

On the accounting side, Amy Park, Audit Partner, National Office for Accounting and Reporting Services, Deloitte (also a co-author), says accounting rules also vary by jurisdiction. "Under both US GAAP [generally accepted accounting principles] and IFRS [international financial reporting standards], Bitcoin is treated as an intangible asset. The resulting accounting and presentation may be different than one would expect for an investment which is often treated and transacted like a financial asset."

It's important to note that the accounting treatment for cryptocurrencies under US GAAP requires write down of losses, yet does not allow for 'write up' of gains. This means investors reviewing financial statements may not see appreciating digital assets, only impaired value, unless companies adopt a robust non-GAAP financial disclosure system or sell the asset and realise the gains. In terms of earnings per share reporting, a significant Bitcoin investment could be an issue.

The rules differ when Bitcoin is used for business payments. For tax purposes, Massey explains that, again, each jurisdiction is different, but one common theme is that Bitcoin is not viewed as a currency. Gains and losses therefore fall outside of the established tax rules of foreign currency.

"This leaves operational and tax complexities in determining character – capital versus ordinary asset – and basis tracking," he notes. "What's more, very few tax authorities accept Bitcoin as a form of payment which means that withholding taxes for things like payroll still need to be remitted in fiat currency, even when the underlying payment to an employee is in Bitcoin."

If accepting Bitcoin from customers for goods or services sold (as MicroStrategy

BOX 1: STABLECOIN: PEGGED FOR STABILITY?

Stablecoin is a generic term for a set of digital currencies that are linked to an underlying asset, such as a fiat currency, real estate, or stocks. Their stability comes from being pegged to these assets that do not form part of the volatile crypto world, and so (in theory) fluctuating with far less volatility. With multiple variants in existence, stable coins are not subject to a single set of regulations, making their control by any one authority more difficult.

In practice, stablecoins, as a digital currency, may suit cross-border payments well because they offer faster, cheaper and more transparent passage, with instant settlement. They may also make storage of foreign currency easier, safer, and cheaper for users of remittance services. However, a number of general issues have been cited, including reduced consumer protection, reduced market competition, increased cyber risk and, if taken up in large measures, a potentially negative impact on financial stability and monetary policy.

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and Square intend) or using it to pay vendors or employees, the accounting side can get complex, notes Park. The main issue arises from using Bitcoin in a manner similar to a financial asset while having to account for it as an intangible asset.

"The transaction price may be different in value than the ultimate amount received from a customer," she explains. "This in turn impacts the amount of revenue a company can record, and could also lead to derivatives that capture the volatility of the price of Bitcoin."

These amounts, while all related to a single transaction, will often be presented in different places on a company's financial statements and, warns Park, "can require consideration of how to best disclose and describe the resulting accounting and presentation".



Bitcoin requires a higher degree of operational care to segregate tranches of investments with varied basis in order to identify which is sold, the associated basis, and the resulting gain.



In addition to these challenges, if taken as a credible asset class, treasurers need to understand Bitcoin "at least as well and as thoroughly as any other asset class to which they might invest", warns Tim Davis, Principal, Risk and Financial Advisory Practice, Deloitte & Touche.

He continues: "Given that Bitcoin has the ability to be a payment methodology that treasury will need to support, the treasurer needs to understand the underlying capabilities of the technology to provide more efficiency and effectivity in the payments requirements of the entire organisation – from customer receipts to employee and payroll payments".

This means practical decisions should be made well before engaging. For Ben Sebley, Chief Growth Officer, BCB Group, the purpose of Bitcoin allocation must be crystal clear from the outset. "Due diligence requires a methodical investigation of the impact such investments may have on different business units and jurisdictions of operation, and how these investments might be reflected in policy and procedural approaches," he advises.

The intentions of use – will it be an operational tool for payments and/or speculative investment, for example – should be evaluated alongside practical questions relating to the purchase, holding, managing and accurate reporting of digital assets.

Treasurers must also decide whether to self-custody or have a third party take custody of their assets, adds Davis. "Given the expertise required for self-custody, we predict most treasurers will elect to use a third-party custodian." And, as Sebley points out, with Bitcoin's potential to increase significantly in value, storage on internal hardware or some form of nanoledger might not be appropriate.

Digital assets can, for example, be stored in 'cold' storage servers (designed for security in an offline environment for data that does not require real-time access), or in 'warm' storage facilities that allow quicker access for active trading.

Choosing a custodian and an approach therefore requires treasurers to consider the purpose of holding these assets, and the level of accessibility and portability needed. Further matters for discussion will include whether or not the provider is required to be registered and certified by a national regulator, in the UK this is the Financial Conduct Authority; the nature of security and protection in the event of disaster, such as backups; and insurance. Designing ongoing monitoring procedures capable of responding to risks specific to each digital asset held is also advisable, says Davis.

Get trading

For Diginex's Hughes, the challenges that corporate treasurers believe they may face are melting away as cryptocurrency credibility rises. But a broader understanding of the properties and benefits of crypto as a working currency are essential for it to be used effectively.

He offers three interesting scenarios to ponder. The first is that the continuation of central bank monetary expansion, used to deflect various financial crises in recent years, is eroding the value of any currencybased reserves held by treasurers. To retain shareholder value, a business needs to grow by more than the eroded value. In current market conditions, this can be a challenge.

The second scenario is around returns on investment in traditional instruments such as money market funds, where yields have dropped away. A third notion to consider, he says, is the portability of crypto. Running a global supply chain in the face of currency controls, and accepting, receiving and transacting in a safe environment, can be difficult in some territories. In each case, he believes that crypto, Bitcoin in particular, offers the best answer. But how does a treasurer get started?

There are two options, say Hughes. The first is join a regulated exchange, such as Equos. This is a matter of onboarding using the same KYC/AML procedures used by banks. Typically, being a digitalfrom-the-ground-up proposition, the process takes hours not weeks, he notes. Onboarding sets up the necessary transparency mechanisms needed for all participants to trade safely.

The exchange model is best suited to making smaller trades in and out of the asset; it's also useful for asset accumulation and generating access to derivatives associated with those assets, explains Hughes. For larger crypto transactions, off-exchange trading capabilities are needed. For Diginex clients, this resembles the private banking experience, where access to a trading desk that will execute sizeable orders directly with market-makers, is offered.

As an initial exploration, it's perhaps logical that the transparency of exchangebased trade will best suit most treasurers interested in bitcoin. However, Hughes says that the majority of treasury deals facilitated by Diginex to date have been OTC.

"Because it is new territory, being hand-held throughout the process is valued," he explains. "We will see corporate treasurers starting to trade for themselves; the systems are being built in order to facilitate that, and access to trading screens and the capacity to track everything from a financial reporting perspective, is coming. But to start with, all traders have to build the appropriate muscles within their organisations."

CBDCs: real-world impact

For those still hesitant, perhaps the concept of a central bank digital currency (CBDC) may provide the right entrée to the world of digital assets. CBDCs are at a very early stage of development but a 2020 survey by Central Banking magazine (cited by Ledger Insights), covering 46 central banks from across the globe, revealed that 65% are exploring the concept. The first transaction between FIs has already taken place.

Indeed, when Banque de France (BDF) successfully completed the first ever successful live settlement of a fund using CBDC tokens (blockchain-secured assets issued and fully backed by the central bank as legal tender) on 17 December 2020, it marked a moment of great importance for the entire financial world.

Concept proven, Anthony Culligan, Chief Engineer of SETL (the provider of the IZNES platform on which the \notin 2m transaction was executed), believes that the technical difference between holding traditional securities and holding cash could now drive the wider adoption of CBDCs.

Typically, a large institution will hold a security with a third-party custodian. This legally keeps it remote from bankruptcy; if the custodian goes under, the asset is ring-fenced. However, cash is held directly in custody by a bank. If that bank gets into trouble, the owner of the cash risks losing all, or at least having to stand in line with other creditors.

When a central bank issues money electronically – in much the same way that a large corporate issues shares electronically – it is available to be held in custody and is bankruptcy remote. "That has some very interesting implications for the way financial services work at the wholesale level," notes Culligan.

Traditional securities are typically traded on one system, such as CREST, Euroclear or Clearstream, and money is moved through another,, such as a real-time gross settlement (RTGS) system. This creates complexity when moving cash at a central bank, even around fairly standard transactions like delivery-versus-payment or if a clearing arrangement through, for example, LCH or Eurex, is used.

Electronic money, however, enables central banks to issue cash to market infrastructures and custodians, allowing direct and instant settlement on a platform such as IZNES by book entry, and without having any 'daylight' exposure to bank intermediaries. "In this setting, money becomes functionally the same as securities and so can operate on the same platform," explains Culligan.

Currently, direct access to electronic central bank money requires an account on the TARGET2 RTGS system. A new platform consolidating TARGET2 and T2S, its securities counterpart, will be launched in November 2022 as T2. Legislation dictates which institutions have access to T2, and therefore electronic central bank money. This means the legal framework must be updated to ensure the momentum of experiments by FIs such as BDF is not lost.

As well as working through the regulatory framework, CBDC momentumbuilding also means clarifying the roles of participants, says Culligan. Indeed, while it is not the position of central banks to undertake client management roles such as KYC and AML – this will remain commercial bank territory – central banks will be drawn closer to the market. "The model that is emerging is that of the commercial bank still owning the customer, but the customer, as an owner of central bank money, having a direct balance-sheet relationship with the central bank," he says.

The BDF experiment focused on the use of CBDC in the wholesale market

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space. "Outside of this experiment, my own view is that we will see the eventual use of CBDC in a retail environment," says Culligan. The same cannot be said by him for bitcoin. For now, he believes it would be "difficult to live your life by Bitcoin when it still exhibits huge swings in value". As such, he sees no way currently in which it will become a significant part of the mainstream monetary system.

What's more, with the almost universally required AML and KYC processes of the financial sector having been derived from international treaties, he believes it would even be difficult, if not impossible, to fit a major crypto currency such as Bitcoin into the multiple legal frameworks that support such regulations.

There is a further interesting point concerning all digital currencies, and that, says Culligan, is the privacy desired by people when spending money; for many tracking is a civil liberties issue.

Coins and notes require no disclosure in use. "Any digital currency or CBDC system has to have a certain amount of anonymity, but only to the extent that it doesn't support large legal enterprises or even governments harvesting transactional data at an individual level." Attending to this issue may not be a concern in some jurisdictions, he says, but others, like Germany, are notably keen to uphold such freedoms.

CBDCs, as agreed social mechanisms of exchange that align with national laws, thus appear to Culligan as "the best way" to engage with the market. That said, a May 2021 report by Fitch Ratings concerning retail CBDCs argues that "the broader adoption of general-purpose CBDCs will present authorities with trade-offs between the associated risks and benefits".

The report notes that "the rise of digital

payment systems, which have strong network effects, can create oligopolies among payment-system providers, often from the private sector". To counter this, if retail CBDCs gain significant traction, control over payments-related data by payments firms could be reduced. However, it adds, if CBDCs offer less privacy than cash, or severely cap amounts held in electronic wallets, some may be deterred from using them".

Should CBDCs experience widespread adoption, Fitch suggests they may also prove disruptive for financial systems, if associated risks are not managed. "These include the potential for funds to move quickly into CBDC accounts from bank deposits, causing financial disintermediation, and for heightened cybersecurity threats as more touchpoints are created between the central bank and the economy." Balancing individual security and systemic risk is the basis of yet another discussion on this topic.

Not going away

While digital assets such as Bitcoin, and now CBDCs, appear to be settling into a long and bumpy relationship with corporates, individuals, and the real world, it's clear that treasurers will need to do their homework before fully engaging.

CBDCs may eventually prove to be the most treasury-appropriate way to participate with the market but adoption is a long way off. Bitcoin may still perhaps be too volatile to be used as anything other than a limited investment instrument.

This may change. Bitcoin and other cryptocurrencies are carving out more mature roles than their chequered past may have previously suggested, and that landscape is changing quickly. With suitable technology to manage them, there is reason for many treasurers to start exploring crypto as an alternative asset class, or even currency.

The argument around the unsustainable mining requirements may stop investment in its tracks if it fails to meet corporate ESG criteria. There may be more fundamental issues that prevent investment terms.

Indeed, at this stage, there will be few, if any, highly leveraged companies wanting to take a major stake in Bitcoin, suggests Deems. "I think it's really only going to be for companies that are in a favourable position from a cash perspective, that can handle cycles of volatility, and have no short-term cash worries."

While Hughes feels it's too early for most, if not all, treasurers to work with anything other than Bitcoin, the broader proof-ofconcept phase for the wider family of crypto has moved on. It is, he believes, set to have a "significant impact on the future of money and how we transact and store value".

The expectation that crypto will eventually achieve a greater market cap than gold makes for a compelling story. Hughes is predicting a shift to a point where treasurers hold crypto as reserve assets, and have access to the digital economy through assets such as Bitcoin. But simultaneously they should be maintaining a watching brief on the development of working concepts such as Ethereum's ERC-20 technical standard for token implementation.

Doing so will provide essential insight into what the future of transaction processing will look like. Indeed, he concludes, "corporate treasurers are soon going to have to get ready to answer such questions when their CFOs and CEOs come asking". Like it or not, that conversation may now also have to provide answers to satisfy corporate ESG sensibilities.

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