

Research Briefing

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Cryptocurrencies



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Contents

Summary	5
1 What are cryptocurrencies?	8
1.1 ‘Cryptocurrencies’, ‘cryptoassets’ or ‘exchange tokens’?	9
1.2 How do cryptocurrencies work?	10
The distributed ledger and blockchain	10
How do people use these systems?	11
1.3 How big is the cryptocurrency market?	12
2 Benefits and challenges	14
2.1 A solution looking for a problem?	14
2.2 A substitute for fiat currencies?	15
An alternative to compromised financial systems	15
Volatility	17
Stablecoins	18
2.3 Efficiency of blockchain	19
Cheaper financial transactions and remittances?	19
Efficiency of multiple verification	20
2.4 Anonymity and crime	21
Is crypto used in crime?	21
How much crypto activity is related to crime?	23
2.5 Consumer risk	24
General consumer warnings	24
Consumer understanding	24
Wider consumer scams	25
2.6 The ‘wild west’ – or an absence of appropriate regulation?	26
3 Policy and regulatory responses	29
3.1 An overview of UK policy development	29
The Kalifa Review 2021	29

A vision of the UK as a global crypto hub	30
3.2 Regulation by the Financial Conduct Authority	31
The regulatory perimeter	31
Protecting consumers	31
Registering cryptoasset businesses	33
3.3 Tax arrangements	35
3.4 Legislation in progress	36
Regulating stablecoins	36
Criminal and civil asset recovery powers	37
3.5 Consultation on a future regulatory regime	37
Overall principles and arrangements	38
Main proposals for specific activities	39
3.6 Wider Parliamentary consideration	39
Treasury Committee Inquiry, 2018	40
Treasury Committee Inquiry, 2022-23	40
All-Party Parliamentary Group	40
4 International approaches	42
4.1 International cooperation	42
The Financial Action Task Force	42
The Financial Stability Board	42
4.2 National responses	43
Appendix: Terminology	44
Defining cryptoassets	44
Glossary	45

Summary

In 2022, the Government announced its [vision for the UK to become a global hub for the crypto and digital assets industries](#). Since then, it has introduced legislation that will support the use of one type of cryptocurrency – backed stablecoins – as a form of payment. In February 2023 it launched [a consultation to develop a new regulatory regime](#) for the crypto sector.

What are cryptocurrencies?

Cryptocurrencies are a digital means of financial exchange. They were originally intended to overcome limitations of existing currencies and financial transactions.

The best-known cryptocurrency is Bitcoin, but [there are over 22,000 different cryptocurrencies](#) (or ‘coins’).

Although there is some variation in the way that they work, [most cryptocurrencies rely on trust in algorithms and technology](#). This differs from traditional ‘fiat currencies’ (like sterling or euros) whose value and reliability are guaranteed by governments and central banks.

But this entirely decentralised approach also means that there is no central authority to oversee the coin or its failures, or to stabilise its value. [So its value can rise or fall quickly and dramatically](#). This has made many coins – notably Bitcoin – attractive as speculative investments rather than as a useful means of exchange.

Because of this, many observers (and particularly regulators) refer to them as [‘cryptoassets’ rather than ‘cryptocurrencies’](#).

But one type of coin – the [stablecoin](#) – is designed to eliminate volatility and so to be more useful as a means of exchange.

How do cryptocurrencies work?

Users of cryptocurrencies may set up an [electronic ‘wallet’](#) to hold funds. They may receive [public and private cryptographic keys and a ‘public address’](#). These allow them to make and accept transfers and to withdraw funds. But many users open simpler accounts with [crypto exchanges](#), particularly if they are more interested in speculating with cryptocurrencies.

All cryptocurrencies use [distributed ledger technology](#) (DLT) to verify transactions. In traditional currency transfer, there is limited recording of individual transactions in senders' and receivers' accounts. In DLT, transactions are confirmed by a wide range of participants before being added to a permanent record. The most familiar version of that record is the [blockchain](#), as used by Bitcoin. The number of confirmations and the public record in the blockchain should, in theory, make retrospective changes to the record virtually impossible.

Benefits and challenges

- Cryptocurrencies are a relatively new phenomenon. The way they operate can challenge existing systems for good or bad. [The technology may have been over-hyped](#) and presented as a solution for vague or unidentified problems.
- Because of their volatility, cryptocurrencies have often been popular in [countries in economic chaos](#) or [subject to international sanctions](#). But [many users are attracted to that volatility](#) in the hope of making money from speculating.
- Proponents of cryptocurrencies involved have often suggested that their [adoption could empower the unbanked and dramatically reduce currency transfer costs](#)(pdf). But [transactions can take some time to complete](#). As well as rendering the approach useless for most payments, this can give rise to [higher charges for faster approval](#).
- Some cryptocurrencies consume vast amounts of electricity and computer processing power. This is unlikely to be sustainable for continued expansion. In February 2023, [a single Bitcoin payment was said to use as much electricity as a single US household does in 27 days](#). But in 2022, one coin, Ethereum, reduced the number of validations required for its payments – and expected to [reduce energy consumption by over 99%](#).
- There have been concerns that the anonymous and stateless nature of most cryptocurrencies has made them attractive to organised crime and tax evasion. While Bitcoin was indeed [strongly associated with the 'dark web'](#), it's not clear how attractive crypto is to criminals. The public blockchain is public and it is often [possible to track transactions](#).
- Cryptocurrencies can present major risks to consumers. There is [little or no guarantee for protecting investment](#). Cryptocurrency [exchanges can be hacked](#). Customers who lose their cryptographic keys [lose all access to their funds](#). There is [a wide range of scams](#) that take advantage of the mystique of the cryptocurrency.

Political and regulatory responses

Initial priorities

As in much of the world, the Bank of England and the Financial Conduct Authority (FCA) had until recently [tended to play down the risk to established systems, while cautiously welcoming the innovation that the new technology offers](#). Early regulatory responses focused on:

- [highlighting risks to consumers](#)
- [registering crypto businesses](#) in line with money laundering regulations
- clarifying and updating [tax arrangements relating to cryptoassets](#)

The UK as a global crypto hub

In 2021, the Kalifa Review of Fintech argued that [the UK could become “a leading global centre” for the crypto and digital assets industry](#).

The Government [built on that vision in 2022](#) and since then has announced a range of initiatives that will support the growth of the industry, while continuing to protect consumers. These include:

- regulating certain stablecoins to allow them to become a “recognised form of payment” through the [Financial Services and Markets Bill 2022-23](#)
- giving the FCA more power to [regulate the way that cryptoassets and crypto businesses are promoted](#)

Consultation on a new regulatory regime

In February 2023 the Government launched [a consultation on a new and wider regulatory regime for cryptoassets](#) that would, among other things, require crypto businesses to:

- be authorised by the FCA
- conduct due diligence on any cryptoasset that they trade in and build in safeguards for consumers
- develop a shared understanding of what constitutes market abuse and systems for identifying and disrupting it

UK regulators also work closely with international agencies, particularly the [Financial Action Task Force](#) and the [Financial Stability Board](#) to coordinate and strengthen international policy relating to cryptoassets.

1 What are cryptocurrencies?

The appendix to this briefing paper has a glossary of technical and regulatory terms.

See the Library briefing paper [Central bank digital currencies](#) for more about plans for digital versions of national currencies.

‘Cryptocurrencies’ are a digital means of financial exchange. Despite some of the terms used, there are no coins or banknotes issued in cryptocurrencies – they are an entirely electronic concept. They essentially give a value to a specified financial transaction between two users at a specific point in time.

They were originally intended to overcome some of the perceived limitations of existing currencies and approaches to financial transactions. The ‘crypto’ in their name arises from the use of cryptographic encryption methods – that is, electronic methods to encode information and to ensure security.

While many central banks are exploring the idea of digital currencies,¹ cryptocurrencies (often referred to as ‘coins’) emerge and operate entirely independently of national authorities. The best-known cryptocurrency is Bitcoin.

Traditional currencies either have an **intrinsic** value (that is, being made from precious metals or being exchangeable with such metals, usually gold) or, more usually, operate as **fiat** currencies, whose value relies on trust arising from being backed by authorities – governments and reserve banks.

Like fiat currencies, cryptocurrencies rely entirely on trust. But they differ in that trust arises in different ways. There are two main approaches:

- In the case of **Bitcoin**, for instance, users rely on the involvement of a wide network of attached computers (‘miners’) and complex technological approaches. The miners work together to guarantee the veracity of transactions carried out, while an underlying published algorithm governs the release of new ‘currency’ to miners.² There is no central authority to maintain the reputation and value of the cryptocurrency (nor indeed to be blamed for currency failure). This is known as a ‘decentralised’ approach.
- Other cryptocurrencies, known as **stablecoins**, are designed to overcome the volatility associated with the Bitcoin approach. Their design tries to steady the value of the ‘currency’ – usually by matching supply to reserves of fiat currencies or other assets, or by building in algorithms that control supply of the coin in order to maintain a fixed value. Such approaches may involve different levels of decentralisation, but guaranteeing reserves in fiat currencies will normally involve some sort of human oversight. That in turn requires users to trust that entity as

¹ See the Library briefing paper [Central bank digital currencies: The digital pound](#) (CBP-9191).

² This approach is generally referred to as “decentralised ledger technology” or “blockchain”, as discussed in [section 1.2](#).

well as the underlying algorithm. (See [“Stablecoins” in section 2.2](#) for more.)

1.1 ‘Cryptocurrencies’, ‘cryptoassets’ or ‘exchange tokens’?

The term ‘cryptocurrency’ itself is open to dispute. This is because it tends to exaggerate their similarity to traditional currencies. Stablecoins try to overcome some of these limitations. But as discussed in section 3, in most cases cryptocurrencies do not meet the three primary functions of money:³

- They are generally used in speculative investment rather than as a **medium of exchange**.
- Their extreme volatility means that they are a poor **store of value**.
- They do not function as a **unit of account**, because they must express their own value in other currencies.

In many respects, cryptocurrencies are more akin to assets – such as shares – than to currencies. For that reason governments and regulators tend to call them ‘cryptoassets’.⁴ But as there are also other types of cryptoasset (see [the appendix](#) to this briefing), financial regulators in the UK often refer to cryptocurrencies more specifically as ‘exchange tokens’ or ‘unregulated tokens’.

This briefing uses all of those terms but tends to use ‘cryptocurrency’ as it is more familiar to most people. This type of cryptoasset has also been the focus of most regulatory and popular attention.

³ See, for instance, Bank of England, [Money in the modern economy: an introduction](#) (Quarterly Bulletin Q1 2014), p5; Oonagh McDonald, Cryptocurrencies: Money, trust and regulation, 2021, p142-143.

⁴ See, for instance, Treasury Committee, [Crypto-assets](#), 19 September 2018, HC 910, 2017-19, para 5.

1.2

How do cryptocurrencies work?

See the POST briefing [Distributed Ledger Technology](#) (August 2018) for further technical information.

The distributed ledger and blockchain

The real difference between conventional currencies and cryptocurrencies is how transactions are recorded and accepted. In traditional currency transfers, the sender's and receiver's bank (or similar intermediary) will each record and store details of transactions, and who's involved in them. There are relatively few records of the transaction.

Although individual cryptocurrencies may vary in the details of their approach, all use a form of **distributed ledger technology** (DLT). This relies on multiple verification of each transaction, with the results being recorded on a publicly available record known as a **blockchain**.⁵ That term refers to blocks of data about confirmed transactions. Those records cannot be changed retrospectively, and new blocks are added on the assumption that preceding data is correct. Again, traditional accounting is based on similar assumptions, but limited verification means that fraud is much easier to perform and hide – but perhaps easier to address if uncovered.

The main potential benefits of information stored in the blockchain are summarised in Box 1.

1 Features of information stored in blockchain

- Traceable (as it records where the asset has been)
- Transparent (as all transactions are recorded and distributed)
- Auditable (as earlier blocks can't be changed and the information provides an audit trail)
- Secure (as it's validated across a network and recorded using complex cryptography)
- Efficient (as the process itself has no specific intermediaries)

Altogether, this means that the distributed ledger and blockchain perform the functions of banks and governments in verifying and managing currency transfer and supply. So faith in the integrity of the independent algorithm is the equivalent of the faith in the governments and reserve banks that sustains traditional fiat currencies.⁶

⁵ See, for instance, Parliamentary Office of Science and Technology, [Distributed Ledger Technology](#), 2018

⁶ As noted in [section 2.2](#), many stablecoins also depend on human intervention.

Approaches to verifying transactions

Bitcoin (among others) uses a ‘**proof of work**’ system to verify transactions. This involves distributing information about recent transactions to a vast network of computer users (‘miners’) as part of a wider cryptographic puzzle. Solving that puzzle requires checking and confirming the veracity of reported transactions. Miners compete to be first to solve the puzzle and be rewarded by payment in new Bitcoins.⁷ The openness of the system to potential miners means that this is also known as a “permissionless” ledger.

The complexity of the task intentionally uses so much computer processing power – and involves so many miners validating each payment – that falsifying transactions would be enormously costly, if not impossible. In the case of Bitcoin, an algorithm developed by Satoshi Nakamoto (which may be a pseudonym) governs the way the blockchain works and the release (and eventual limits of) new Bitcoin to miners.⁸

An alternative approach to validation is ‘**proof of stake**’. Ethereum, one of the larger cryptocurrencies, moved to this system in 2022. As its website explains, holders of Ethereum may apply to “stake” a minimum holding of the coin in return for the opportunity to be randomly chosen to validate a set of transactions and receive payment in Ethereum. Their decisions are in turn shared with a wider set of validators. Those involved risk losing their stake if they behave “dishonestly or lazily.”⁹ Reducing the number of validators in such “permissioned” systems consumes much less energy than proof-of-work: the amount of electricity consumption in Bitcoin mining has become a major environmental concern (as discussed in [section 2.3](#) of this paper).

How do people use these systems?

At its most basic, individuals hold accounts and transfer cryptocurrency funds in much the same way as they would transfer fiat currencies (such as pounds or euros) between bank accounts – which, after all, involve no physical transfer of cash.¹⁰

Individuals who want to use cryptocurrencies to transfer funds set up an account, which provides them with a ‘wallet’ and a ‘public address’ for the account. It also gives them a public and a private cryptographic key, which are the basis of individual account-holders’ security and access to their funds. Users can share their public key with others in order to receive payment (much like providing bank account numbers and sort codes). They use their private key – effectively a very complex password – to make payments.

⁷ Forbes Advisor, “[How Does Bitcoin Mining Work?](#)”, 22 July 2022 (accessed 8 February 2023)

⁸ See, for instance, toptotal.com, [Cryptocurrency for Dummies: Bitcoin and Beyond](#) (accessed 21 October 2022)

⁹ Ethereum.org, [Proof-of-stake \(POS\)](#), 10 October 2022 (accessed 21 October 2022). For a wider overview, see for instance The Motley Fool, “[What Is Proof of Stake \(PoS\) in Crypto?](#)”, 12 December 2022 (accessed 8 February 2023).

¹⁰ See, for instance, “[How does cryptocurrency work?](#)”, The Times, 6 December 2022 (accessed 13 February 2023)

Keeping private keys secure is therefore essential. They provide the only access to any funds held. In addition, the nature of the cryptographic security that sets them up means that can't be replaced if they're lost.¹¹

There are two main types of providers of crypto accounts:

Decentralised exchanges (DEX)

These are online facilities that provide wallets for individuals who want control (and privacy) and to undertake peer-to-peer (P2P) transfers. Like Bitcoin, they're essentially based on online protocols controlled by algorithms, and so operate outside national jurisdictions or regulation.¹² The biggest such exchanges in February 2023 were Uniswap and dYdX.¹³

Centralised exchanges (CEX)

These are much more akin to mainstream financial institutions, such as trading platforms for shares. They may offer a range of services to subscribers, including wallets and keys as discussed above. Or they may offer more familiar types of accounts that allow customers to log in and move balances. In many if not most models, the exchange itself is recorded on the blockchain as the 'owner' of the various coins: customers trade within the exchange and their 'balance' is effectively what the exchange 'owes' them.¹⁴

Such approaches are more straightforward for the majority of crypto users, who are more attracted to using cryptocurrencies to speculate rather than for online payment. But customers' funds are typically less secure from hackers and the failure of the company, as in the case of FTX ([see box 2](#)).¹⁵ The largest such exchanges in February 2023 were Binance and Coinbase.¹⁶

UK regulations currently require centralised exchanges to register with the Financial Conduct Authority and to comply with wider "know your customer" and anti money laundering rules. They are an increasing focus of regulation in the UK, as discussed in [section 3](#).

1.3 How big is the cryptocurrency market?

On 1 February 2023, CoinMarketCap.com, a market tracking site, listed values for 22,000 cryptocurrencies. They had a total market capitalisation (or

¹¹ See, for instance, "How does cryptocurrency work?", The Times [online], 6 December 2022 (accessed 13 February 2023); HMRC, [Cryptoassets: an introduction](#), 3 November 2022 (accessed 13 February 2023), para 10000-10400

¹² See, for instance, Corporate Finance Institute, "[Cryptocurrency Exchanges](#)", 3 December 2022; [Uniswap Protocol](#); [dYdX](#).

¹³ CoinMarketCap.com, [Top Cryptocurrency Decentralized Exchanges](#) (accessed 13 February 2023)

¹⁴ See, for instance, Corporate Finance Institute, "[Cryptocurrency Exchanges](#)", 3 December 2022 (accessed 7 February 2023).

¹⁵ See, for instance, Corporate Finance Institute, [as above](#).

¹⁶ CoinMarketCap.com, [Top Cryptocurrency Spot Exchanges](#) (accessed 13 February 2023)

current price per ‘coin’ multiplied by the number of ‘coins’ in circulation) of £870 billion.¹⁷

The total value of the market can itself vary dramatically: on 12 November 2021, CoinMarketCap valued the total market at £2,495 billion – that is, heading towards three times as much as its value in February 2023.¹⁸

On 1 February 2023:

- Bitcoin accounted for over 42% of the total market.
- Ethereum, the second biggest, held just under 19%.
- Tether – the third, and the biggest stablecoin – held 6%.
- The ten biggest cryptocurrencies accounted for 83% of the market.¹⁹

Considerable as those figures may be, cryptocurrency accounts for a very small fraction of financial transactions overall. While figures vary, the average volume of Bitcoin transactions in the year to 30 June 2022 varied between 200,000 and 280,000 per day.²⁰ There were about a million daily Ethereum transactions over the same period.²¹ But in contrast, Visa alone was processing an average of 700 million transactions a day.²²

¹⁷ CoinMarketCap.com, [Today's Cryptocurrency Prices by Market Cap](#), 1 February 2023 (accessed 1 February 2023)

¹⁸ CoinMarketCap.com, [Global Cryptocurrency Charts](#)

¹⁹ CoinMarketCap.com, [Today's Cryptocurrency Prices by Market Cap](#), 1 February 2023 (accessed 1 February 2023)

²⁰ Nasdaq Data Link, [Bitcoin Number of Transactions](#) (accessed 20 October 2022)

²¹ YCharts, [“Ethereum Transactions Per Day”](#) (accessed 20 October 2022)

²² Calculated from Visa.co.uk, [Visa fact sheet](#) (pdf) (accessed 20 October 2022)

2 Benefits and challenges

2.1 A solution looking for a problem?

Cryptocurrencies and associated distributed ledger technologies are a comparatively recent phenomenon. Although some of the concepts had been described in earlier decades, Bitcoin itself emerged in 2008.²³

Proponents and critics alike tend to describe the new technology as ‘disruptive’, whether for good or bad. It certainly challenges many of the conventional approaches to financial systems and regulation. To date many risks and challenges have been identified alongside the potential benefits.

The Financial Times, for instance, is sceptical about many of the claims made for blockchain and cryptocurrencies. In an article in 2019, prominent critic of the industry Jemima Kelly noted that while the “hype” had promised that blockchain would transform or render traditional banking redundant, “the technology has not lived up to its promise and there are signs the hype is fading”.

She suggested that part of the problem had arisen from applying blockchain-based “solutions” to problems that hadn’t been clearly defined:

Rather than beginning with the challenges banks were trying to solve...too many projects started with the technology, tried to discern how to make money from it, and worked from there.²⁴

Other commentators, while acknowledging the wider challenges, highlight the potential possibilities that the new technology might offer. The 2021 Kalifa Review of Fintech, for instance, declared that with flexible regulation, “[t]he UK has the potential to be a leading global centre for the issuance, clearing, settlement, trading and exchange of crypto and digital assets.”²⁵

²³ Ledger Academy, [A brief history of bitcoin & cryptocurrencies](#), 15 September 2022 (accessed 21 October 2022)

²⁴ “[Blockchain: disillusionment descends on financial services](#)”, Financial Times, [£], 24 September 2019

²⁵ HM Treasury, [Kalifa Fintech Review: Final report](#), 16 April 2021, p30

2.2

A substitute for fiat currencies?

An alternative to compromised financial systems

Although the international volume of cryptocurrency transactions is much lower than other forms of electronic and cash payments (as discussed in [section 1.3](#)), cryptocurrencies have been adopted or promoted in economies with unreliable national financial systems. Such ventures have had varying levels of success.

Ukraine

Ukraine quickly established systems to receive and spend funds in several major cryptocurrencies after the full-scale Russian invasion began in February 2022.²⁶ According to *The Economist*, the Ukrainian Government took steps to protect the economy and the national currency, the hryvnia. It suspended most currency transfers and froze the official exchange rate, and quickly introduced new but liberalised regulation for crypto trading.²⁷

The *Financial Times* reported in March 2022 that the sudden comparative “flexibility and speed” of crypto transfers had allowed the Government to receive the over \$100 million in crypto donations in the first month or so of the war. The Government had negotiated arrangements to pay for military equipment in crypto currencies.²⁸

Cointelegraph.com, a crypto news website, argued that this approach had helped the Ukrainian Government to protect its financial system from “sustained attack by Russia”, while allowing funds and donations to flow into the economy.²⁹

El Salvador

In 2021, El Salvador made Bitcoin legal tender in the country. It had earlier replaced its own currency – the colón – with the US dollar. The change theoretically obliged all businesses to accept payment in Bitcoin from September 2021. The President claimed that the change would save Salvadoreans \$400 million in remittance fees and open up financial services to those without bank accounts.³⁰

²⁶ [“Ukraine Demonstrates That Cryptocurrency Is A Potent Tool For Marshaling Grassroots Support”](#), Forbes.com, 21 March 2022 (accessed 25 October 2022)

²⁷ [“How is Ukraine using crypto to fund the war?”](#), *The Economist*, 5 April 2022 (accessed 25 October 2022)

²⁸ [“How Ukraine embraced cryptocurrencies in response to war”](#), *Financial Times* [£], 19 March 2022 (accessed 13 February 2023)

²⁹ [“Ukraine has shown the value cryptocurrency offers to real people”](#), Cointelegraph.com, 18 August 2022 (accessed 25 October 2022)

³⁰ [“El Salvador's world-first adoption of bitcoin endures bumpy first day”](#), Reuters [online], 8 September 2021 (accessed 26 October 2022)

Limited internet access made it difficult for Salvadorians to use the government app.³¹ The country's credit rating was downgraded and the World Bank said that it could not support the move.³² In January 2022, the International Monetary Fund urged El Salvador to reverse its action, noting concerns about "financial stability, financial integrity, and consumer protection".³³ The Government's initiative had continued to delay agreement of a \$1.3 billion IMF loan to the country.³⁴

In September 2022, John Hawkins, senior lecturer at the University of Canberra, described the experiment as a "failure". The value of Bitcoin had crashed and the Government itself had lost about \$50 million from investing in the cryptocurrency.³⁵

Venezuela

The American magazine, The Atlantic, reported in 2017 on a take-off in Bitcoin mining and trading in Venezuela at a time when that country was facing an annual inflation rate of 1,600%.³⁶

The Venezuelan Government launched its own cryptocurrency, the petro, in 2018. According to analyst Moises Rendon, there was little public information about the petro. He said that it appeared to be "built upon a closed system that claims to be a private blockchain" and was purportedly "backed by a basket of natural resources", but there was little evidence that it was being adopted.³⁷

Rendon argued that decentralised currencies like Bitcoin might help to preserve savings and allow international transactions (including remittances and humanitarian aid) while avoiding "manipulation" and "government interference".³⁸

Nevertheless, the Venezuelan think tank Ecoanalítica reported in November 2021 that despite the alternatives, 65% of all transactions in the country were being made in US dollars.³⁹

³¹ ["El Salvador's world-first adoption of bitcoin endures bumpy first day"](#), Reuters [online], 8 September 2021 (accessed 26 October 2022)

³² [As above](#)

³³ ["Ditch Bitcoin: IMF Urges El Salvador to Rethink Crypto"](#), Bloomberg [online], 25 January 2022 (accessed 26 October 2022)

³⁴ [As above](#)

³⁵ ["One year on, El Salvador's Bitcoin experiment has proven a spectacular failure"](#), The Conversation [online], 11 September 2022 (accessed 26 October 2022)

³⁶ The Atlantic, ["Big in Venezuela: Bitcoin Mining"](#), September 2017 (accessed 26 October 2022)

³⁷ Center for Strategic & International Studies, ["How Open and Public Cryptocurrencies Can Help Venezuelans"](#), 13 April 2021 (accessed 26 October 2022)

³⁸ [As above](#)

³⁹ Noticia Venevisión, ["Ecoanalítica: 65% de las transacciones en el país son en dólares"](#), 17 November 2021 (accessed 26 October 2022)

China

In an earlier case, Forbes reported that investors had turned from Chinese yuan to Bitcoin as the US-China trade war developed in 2019. It said that Bitcoin was attractive both a “dollar surrogate” and as an investment. Indeed, as Chinese consumers turned to Bitcoin, their combined demand pushed its price up.⁴⁰

Volatility

A major impediment to the use of cryptocurrencies as an effective means of exchange is that most of them – at least until recently – have been extremely volatile in their value. The chart below shows the variation in the value of Bitcoin between January 2016 and the end of January 2023.

At the beginning of 2020, one Bitcoin was worth about £5,600. Between February and March 2021 its price varied between £33,000 and £44,000, but by July it had fallen to £24,000. On 12 November 2021 it reached its maximum value to date – over £48,000 – and then fell and rose sharply, to as low as £13,350 in November 2022.⁴¹



Note: End of day closing prices

Sources: [Yahoo Finance](#)

Commenting on the issue, the Congressional Research Service noted that the 53% overall fall in value of Bitcoin in the first half of 2018 was equivalent to an annual inflation rate of 346%, a situation that undermined its attractiveness both as a store of value and as a means of exchange and pricing.⁴²

⁴⁰ “[Crypto Is Replacing Fiat Currency In Troubled Countries](#)”, Forbes, 5 August 2019 (accessed 26 October 2022)

⁴¹ Coinmarketcap.com, [Bitcoin](#) (accessed 26 October 2022)

⁴² Congressional Research Service, [Cryptocurrency: The Economics of Money and Selected Policy Issues](#), 7 December 2018, p13 (accessed 26 October 2022)

In 2018, the Financial Conduct Authority told the Treasury Committee that this extreme volatility resulted from the absence of any inherent value, controls or practical use beyond speculation itself.⁴³

Stablecoins

The crypto industry has responded to the challenges presented by volatility through the development of a different type of ‘coin’ – the ‘stablecoin’. These attempt to achieve some of the characteristics of fiat currencies.

Different stablecoins are designed in different ways to achieve the goal of price stability, normally by pegging the value of the ‘coin’ to a fiat currency, generally the US dollar. Although there are various models⁴⁴, there are two particular approaches:

Backed stablecoins

These set out to hold a matching account of fiat currency or a sufficiently liquid asset for each unit of the cryptocurrency released.

While the concept is simple, it does involve a degree of reliance on (and so trust in) human agents. The largest such cryptocurrency is Tether. But Tether has been the subject of various controversies and concerns, including about the reliability of its reserves. In 2021, for instance, the New York Attorney General fined Tether \$18.5 million, claiming that its reserves were not as liquid as claimed, a situation that might lead to crisis in the event of a run on the coin. Tether agreed to pay but did not admit to the accusation.⁴⁵

Algorithmic stablecoins

These do not rely on reserves, but rather on algorithms designed to maintain the coin’s value in response to wider market movements. They typically involve a relationship between the stablecoin and another cryptocurrency. When the value of the stablecoin begins to move away from its “pegged” position, the algorithm allows more of the coin to be created or destroyed to rebalance supply and so the price.⁴⁶

While this approach retains the benefit of decentralisation of trust, it depends on the stability of and confidence in wider crypto networks.⁴⁷

In May 2022, the value of one algorithmic stablecoin, Terra(USD), crashed when sudden wider withdrawals in associated networks meant that its linked

⁴³ Treasury Committee, [Crypto-assets](#), HC 910, 19 September 2018, para 61

⁴⁴ This is a complex and evolving area. See, for instance, Hedera.com, “[What is a stablecoin?](#)”, for a general introduction.

⁴⁵ See, for instance, “[The coin that could wreck crypto](#)”, New York Times, 17 June 2022 (accessed 22 November 2022) and “[The Tether controversy, explained](#)”, The Verge, 16 August 2021 (accessed 22 November 2022).

⁴⁶ Coindesk.com, “[Algorithmic Stablecoins: What They Are and How They Can Go Terribly Wrong](#)”, 16 May 2022 (accessed 24 November 2022)

⁴⁷ Hedera.com, “[What is a stablecoin?](#)” (accessed 24 November 2022)

cryptocurrency, Luna, was unable to respond quickly enough to the demands placed on it. The episode led to a crisis for the cryptocurrency market as a whole, and a loss of overall value of about \$300 million.⁴⁸

Despite those high-profile events, the idea behind stablecoins has led to their increasing use as a medium of exchange within crypto markets themselves. Governments are responding to the potential opportunities and threats they pose to both consumers and wider financial stability. For instance, the UK Government is moving to regulate “digital settlement assets” (essentially fiat-backed stablecoins) through the Financial Services and Markets Bill 2022-23, as discussed in [section 3.4](#) of this briefing.⁴⁹

2.3

Efficiency of blockchain

Cheaper financial transactions and remittances?

As cryptocurrencies are essentially globalised – by existing electronically and not being linked to specific national or corporate institutions – they have the potential to reduce or avoid a range of transaction and exchange rate charges. The idea of avoiding costs associated with traditional financial institutions – and indeed the need to have a bank account – has contributed to powerful visions of the ‘revolutionary’ possibilities of cryptocurrencies.

In 2019, Facebook announced plans (since abandoned) for a stablecoin, the Libra. The Libra White Paper invited involvement from commercial partners and NGOs, and explained the potential benefits for the unbanked:

All over the world, people with less money pay more for financial services. Hard-earned income is eroded by fees, from remittances and wire costs to overdraft and ATM charges. Payday loans can charge annualized interest rates of 400 percent or more, and finance charges can be as high as \$30 just to borrow \$100. When people are asked why they remain on the fringe of the existing financial system, those who remain “unbanked” point to not having sufficient funds, high and unpredictable fees, banks being too far away, and lacking the necessary documentation.⁵⁰

The range of cryptocurrencies, exchanges and services available makes it hard to determine and compare costs. The investment website The Motley Fool summarises potential charges as:

- trading fees, charged by exchanges for each transaction

⁴⁸ “[What Really Happened To LUNA Crypto?](#)”, Forbes, 20 September 2022 (accessed 24 November 2022)

⁴⁹ See also House of Commons Library briefing, [Financial Services and Markets Bill 2022-23](#) (CBP-9594), for further background.

⁵⁰ Libra, [Libra White Paper](#) (pdf), 23 July 2019, p1 (accessed 24 November 2022)

- similar fees for blockchain wallets when not part of an exchange's standard service
- transaction fees built into the design of each cryptocurrency itself⁵¹

Limited regulation of the sector means that there are few requirements for transparency regarding charges. Nevertheless, Ian Taylor, Executive Director of the trade body CryptoUK, told the House of Commons Treasury Committee that transaction charges for stablecoins could already be as low as 1%, compared to over 2% for credit cards.⁵²

Efficiency of multiple verification

The permissionless distributed ledger system depends upon the involvement of vast networks of miners motivated by the possibility of earning a share of new cryptocurrency. This approach would seem unsustainable if visions for the potential extent of the industry are to be realised.

Environmental impact

Digiconomist, which describes itself as “a platform...dedicated to exposing the unintended consequences of digital trends, typically from an economic perspective”, publishes the Bitcoin Energy Consumption Index (as one of several related indices). This reported that while levels fluctuate, on 1 February 2023, Bitcoin mining alone consumed as much electricity as Chile and had a carbon footprint the size of Morocco's. Processing a single Bitcoin transaction used as much power as the average US household did in almost 27 days.⁵³

This concern motivated Ethereum to move from proof-of-work to the more limited proof-of stake approach (as outlined in [section 1.2](#)) in September 2022. The move – known as ‘the merge’ – was expected to reduce Ethereum's energy consumption by 99%.⁵⁴

Verification time

Another consequence of multiple verification of transactions has been the time and cost of completing the process and so authorising payments: they can only be confirmed once a block is completed. In the week to 1 February 2023, the average confirmation time for a Bitcoin transaction was over 14 minutes, but for Ethereum the average block completion time was about 12 seconds.⁵⁵ Coinmarketcap.com notes that in the case of Bitcoin, transaction volumes and other factors can affect this. But users can avoid backlogs by

⁵¹ The Motley Fool, “[How Much Are Cryptocurrency Transaction Fees?](#)”, 30 June 2022 (accessed 24 November 2022)

⁵² Treasury Committee, [Oral evidence: The crypto-asset industry](#), HC 615, 14 November 2022, Q38

⁵³ Digiconomist, [Bitcoin Energy Consumption Index](#) (accessed 1 February 2023)

⁵⁴ “[Ethereum cryptocurrency completes move to cut CO2 output by 99%](#)”, The Guardian, 15 September 2022 (accessed 6 February 2023)

⁵⁵ YCharts, [Ethereum Average Block Time](#) and [Bitcoin Average Confirmation Time](#) (accessed 7 February 2023). Note differing terminology.

paying higher transaction fees.⁵⁶ Bitcoin traders sometimes use escrow services to delay payment until goods have been received, although this entails further fees.⁵⁷

Commenting on the effect of ‘the merge’ on Ethereum’s efficiency, Professor Carol Alexander at University of Sussex Business School, suggested that it was “the beginning of the end of bitcoin’s dominance” and that it was a “purely speculative asset”.⁵⁸

2.4 Anonymity and crime

Another typical feature of type of the decentralised blockchain is its anonymised nature. While traditional financial transactions of any significance tend to generate a set of traceable records, once funds have been converted into cryptocurrencies (through exchanges or similar services), the public blockchain records transfers but does not link them to **identified** users. The global nature of the market means that funds may also enter and leave in different jurisdictions, further complicating efforts to follow the money.

This has led to widespread concern about the attractiveness of cryptocurrencies for money laundering, supporting criminal transactions and tax evasion – although the evidence is not clear-cut.

Is crypto used in crime?

Bitcoin was central to the operation of Silk Road, the online black market that brought the ‘dark net’ to public attention. Silk Road was founded in 2011 by Ross Ulbricht, an “amateur programmer with a strong libertarian and anarchist bent [who] dreamt of an online marketplace where people would be able to buy and sell narcotics and other illicit items, without governmental interference.”⁵⁹ Ulbricht essentially offered an online escrow service and took commissions from every Bitcoin transaction.⁶⁰

While such events associated Bitcoin with online crime, views about the relationship are a matter of dispute and uncertainty. For instance, witnesses told the Treasury Committee in 2018 that while there were indeed cases of its use in money laundering and terrorist financing, it was “not widespread”. David Raw, Deputy Director of Banking and Credit at the Treasury, noted in particular that the public record of movements in the blockchain allowed tracing and investigation. Terrorists might prefer to use other methods, such

⁵⁶ Coinmarketcap.com, “[How Long Does a Bitcoin Transaction Take?](#)” (accessed 1 February 2023)

⁵⁷ CSIRO, “[Blockchain patterns: Escrow](#)” (accessed 25 November 2022)

⁵⁸ “[Ethereum cryptocurrency completes move to cut CO2 output by 99%](#)”, The Guardian, 15 September 2022 (accessed 6 February 2023)

⁵⁹ David Adler, [Silk Road: The Dark Side of Cryptocurrency](#), Fordham Journal of Corporate & Financial Law, 21 February 2018 (accessed 28 November 2022)

⁶⁰ [As above](#)

as cash couriers.⁶¹ In 2020, the Congressional Research Service argued that it was “relatively easy” for law enforcement to analyse transaction patterns involving anonymous accounts and to link them to known account-holders.⁶²

Nevertheless, the crypto industry has developed a range of approaches to protect the anonymity of transactions. These include such services as “blenders”, “mixers” or “tumblers”. As their names suggest, they break up the transparency of payment flows by “jumb[le] up an amount of bitcoin in private pools before spitting them out to their intended recipients.” Some “privacy coins”, notably Zcash and Monero, are designed to obscure transactions altogether.⁶³

Such approaches have drawn the attention of regulators and law enforcement agencies. Advocates of crypto privacy have argued that such coins have legitimate uses, for instance in protecting users from repressive governments.⁶⁴ Cointelegraph suggested in a 2021 article that increasing regulatory restrictions on privacy coins had led many exchanges to “delist” them, and that this in turn had reduced their liquidity and attractiveness to terrorist fundraisers.⁶⁵ In May 2022, the US Treasury sanctioned Blender.io, which it said “is used by the Democratic People’s Republic of Korea...to support its malicious cyber activities and money-laundering of stolen virtual currency.”⁶⁶

How is crypto used in crime?

Europol published an overview of the relationship between crypto and crime in January 2022. This noted:

- Although they increasingly used cryptocurrency, criminals seemed to prefer to use cash and other types of transaction, partly because cryptocurrencies aren’t a reliable store of value.
- Cryptocurrencies are increasingly being used in money laundering, and criminals have developed and market increasingly sophisticated techniques to achieve this. They are also popular as a means of payment or for use in investment fraud. Their use in funding terrorism is limited.
- As well as money-laundering, crypto is most popular in the online trade of illicit goods and services and fraud. It seems particularly prevalent in the trade of child sex abuse material (CSAM).

⁶¹ Treasury Committee, [Crypto-assets](#), HC 910. 19 September 2018, para 92-94

⁶² Congressional Research Service, [Cryptocurrency: The Economics of Money and Selected Policy Issues](#), 9 April 2020, p16 (accessed 28 November 2022)

⁶³ Robert Stevens, “[Bitcoin Mixers: How Do They Work and Why Are They Used?](#)”, CoinDesk, 22 August 2022 (accessed 29 December 2022)

⁶⁴ [As above](#)

⁶⁵ “[Terrorists still raise money through crypto, but the impact is limited](#)”, Cointelegraph, 9 April 2021 (accessed 5 January 2023)

⁶⁶ US Department of the Treasury, “[U.S. Treasury Issues First-Ever Sanctions on a Virtual Currency Mixer, Targets DPRK Cyber Threats](#)” (press release), 6 May 2022

- The introduction of anti money laundering and know your customer requirements has improved the effectiveness of law enforcement efforts.⁶⁷

How much crypto activity is related to crime?

More recent reviews have highlighted the sheer difficulty of estimating the scale of involvement of cryptocurrency in organised crime.

In 2022, Jack Schickler, formerly a policy analyst at the European Commission and HM Treasury, noted that estimates of the proportion of transactions related to crime varied from 0.15% to 46%. He highlighted some of the practical difficulties involved –from the sheer difficulty of identifying criminal transactions to estimating the comparative extent of their use within a rapidly changing market. In addition, different analysts used different assumptions and methodologies.⁶⁸

In 2021, the international Financial Action Task Force (FATF)⁶⁹ published a report that considered the effectiveness of emerging controls on combating crime-related crypto transactions. It looked at both person-to-person (P2P) transactions and those involving “virtual asset service providers” (VASPs, which broadly equate to centralised exchanges). The study engaged seven companies to estimate the proportion and US dollar value of illicit Bitcoin transactions. The companies’ results varied dramatically:

- Estimates of the proportion of illicit transactions involving VASPs varied between 1.7% and 8.1%. The estimated monetary value of those transactions varied between 0.0% and 1.6%.
- Estimates of the proportion of illicit P2P transactions varied between 3.6% and 12.9%. The estimated monetary value of those transactions varied between 0.1% and 27.9%.⁷⁰

While there was a general consensus that there was a higher level of criminal involvement in P2P transactions, the FATF noted the figures were based on only “identified” criminal transactions and so “should be treated as the likely minimum of illicit activity.”⁷¹

⁶⁷ Europol, [Cryptocurrencies: tracing the evolution of criminal finances](#), 26 January 2022, p2-3

⁶⁸ Jack Schickler, “[How big is crypto crime, really?](#)”, CoinDesk, 9 May 2022

⁶⁹ FATF is an international agency that “leads global action to tackle money laundering, terrorist and proliferation financing.” See also [section 4](#).

⁷⁰ FATF, [Second 12-Month Review of the Revised FATF Standards on Virtual Assets/VASPs](#), p24-30

⁷¹ [As above](#), p29

2.5

Consumer risk

The rise of cryptocurrencies has raised concerns about risks to individual users and investors.

General consumer warnings

Since 2017, the FCA has published warnings to consumers about the risks involved in investing in cryptoassets, as discussed in [section 3.2](#). Other governments and national regulators offer very similar advice to consumers.⁷²

Consumer understanding

The 2018 Treasury Committee inquiry highlighted several major concerns for consumers arising from what one witness described as the “wild west” nature of the cryptoasset market. These were:

- losing much or all of initial investments as a result of price volatility
- losing funds held in exchanges to hackers
- losing access to funds after forgetting or losing passwords
- investing in fraudulent or missold initial coin offerings (ICOs, that is, opportunities to invest in new coins)⁷³

In 2019 the FCA published findings from a research study that highlighted limited public understanding, including among the small minority (about 3% of those surveyed) who had invested in the market. The FCA highlighted the following points (although given the small number of investors, it cautioned against relying on any associated figures):

- Some consumers hoped to ‘get rich quick’ and responded to influence from social media as a motivation.
- Many investors appeared over-confident about what they were buying and seemed to believe that they were buying tangible assets. The researchers suggested that the use of such terms as ‘mining’ and ‘coin’ might reinforce this.
- Some investors appeared to trust such sources as social media much more than ‘mainstream’ media or official sources. Many reported undertaking limited or no due diligence before investing. While there was

⁷² See, for instance, ESMA, “[EU financial regulators warn consumers on the risks of crypto-assets](#)” (press release), 17 March 2022 (accessed 30 December 2022)

⁷³ Treasury Committee, [Crypto-assets](#), HC 910. 19 September 2018, para 117-122

some awareness of the risks involved, some investors considered that to be part of the attraction.

- But only 3% of UK consumers had invested and 73% didn't know what a 'cryptocurrency' was or couldn't define it. Few of those who hadn't invested were interested in doing so, and about half of those who had done so had invested less than £200.⁷⁴

The FCA undertook follow-up studies in 2021. Overall, the findings hadn't markedly varied:

- 78% had heard of cryptocurrencies in 2021, compared with 73% in 2020.
- But the proportion of that group able to choose the "correct" definition from a list had fallen from 75% to 71% (or 55% of the total sample).
- The study estimated that the proportion of UK adults holding cryptoassets had increased from 3.9% to 4.4%, with average investments up from £260 to £300. The profile of users was still "largely male, over 35, and at AB social grade."
- 38% of crypto users saw their investment as "a gamble", down from 47 % a year before.
- Those who'd been motivated to invest by advertising were more likely to regret their decision.⁷⁵

Wider consumer scams

Regulators and cybersecurity companies highlight a range of wider potential scams that may affect consumers. Kaspersky, for instance, notes a number of "common scams", including phishing, blackmailing emails that demand payment in cryptocurrency, fake celebrity endorsements, and fake websites that gather information or accept "investments" and then disappear.⁷⁶ It's important to note, though, that such scams mirror those that target people using more conventional financial or other services. But there are some that may be more inspired by the comparative mystique of the crypto industry:

- **Pump and dump schemes** invite consumers to invest in a coin, thereby driving up the price. The promoters then cash in their own investments, taking profits and causing the price of the coin to crash, a process that "can happen within minutes."
- **Fraudulent initial coin offerings (ICOs)** encourage consumers to invest in non-existent new coins.

⁷⁴ FCA, [Consumer attitudes and awareness of cryptoassets: research summary](#), 7 March 2019 (accessed 30 December 2022)

⁷⁵ FCA, [Research Note: Cryptoasset consumer research 2021](#), 17 June 2021 (accessed 4 January 2023)

⁷⁶ Kaspersky, [Common cryptocurrency scams and how to avoid them](#) (accessed 4 January 2023)

- **Cloud mining scams** promise a share of returns made from “renting” non-existent crypto mining hardware.⁷⁷

The law firm Pinsent Masons reported that between October 2021 and September 2022, there were just over 10,000 incidents of crypto fraud in the UK reported to Action Fraud. These represented total losses of £226 million, up 32% over the previous year.⁷⁸

Consumers also risk losing investments due to wider failures in the industry, as discussed below.

2.6

The ‘wild west’ – or an absence of appropriate regulation?

Many of the issues discussed in this section do indeed highlight what the Treasury Committee – among others – called the “wild west” nature of the growing industry in 2018.⁷⁹

The industry has continued to grow and to innovate. But events like the sudden collapse in November 2022 of a major exchange, FTX (see [box 2](#)), highlighted flaws in the way that at least some actors operate.

Jemima Kelly, a prominent critic of crypto, wrote in the Financial Times in December 2022 that the collapse of FTX and other ventures had revealed:

...the utter lawlessness that fuels crypto. Free from the burdensome yoke of regulation that the non-crypto world has to deal with, the likes of FTX have been free to do as they please...⁸⁰

Challenged by the Treasury Committee as to whether such scandals revealed the entire industry to be based on speculative hype, Daniel Trinder, a Vice President at Binance, argued that they resulted from “failures around governance, risk management, excessive leverage and, if we believe the reports, inappropriate use of clients’ assets”, which were “traditional failures that have plagued traditional finance.”⁸¹

Ian Taylor, Executive Director of the trade body CryptoUK, added that his organisation had highlighted the importance of regulating market

⁷⁷ Kaspersky, [Common cryptocurrency scams and how to avoid them](#) (accessed 4 January 2023)

⁷⁸ “[Crypto fraud jumps by a third in UK](#)”, Financial Times [£], 28 November 2022 (accessed 4 January 2023)

⁷⁹ UK Parliament, “[Wild West](#)” crypto-assets should be regulated”, 19 September 2018

⁸⁰ Jemima Kelly, “[What this year in crypto has taught us](#)”, Financial Times [£], 22 December 2022 (accessed 7 February 2023)

⁸¹ Treasury Committee, [Oral evidence: The crypto-asset industry](#), HC 615, 14 November 2022, Q2

participants to the Committee's previous inquiry in 2018. He said that appropriate regulation might have prevented such events.^{82 83}

⁸² Treasury Committee, [Oral evidence: The crypto-asset industry](#), HC 615, 14 November 2022, Q2

⁸³ Please note that FTX was registered in the Bahamas.

2 The collapse of FTX

In November 2022, FTX, based in the Bahamas and one of the biggest centralised exchanges in the world, quickly collapsed, losing billions of dollars and depressing the value of the whole crypto market. Sam Bankman-Fried was the CEO of FTX.⁸⁴

In 2021, Changpeng Zhao, the chief executive the rival exchange Binance, sold his holdings in FTX back to the company. He was paid in FTT, which was FTX's own coin.⁸⁵

On 2 November 2022, CoinDesk reported on apparent financial irregularities in the relationship between FTX and Alameda, another company owned by SBF. Essentially, Alameda appeared to be funded in FTT.⁸⁶

Mr Zhao said that he was going to sell his tokens on 6 November, noting concerns about FTX's financial stability. That sparked a run on both FTT and on funds held in FTX.⁸⁷

On 8 November, Mr Bankman-Fried announced a shortfall of \$8 billion to meet those demands. The same day, Binance offered to buy FTX, but the next day it withdrew its offer, saying that the situation was "beyond our control or ability to help".⁸⁸

On 10 November, the Bahamian authorities froze FTX's assets, and the next day FTX filed for bankruptcy.⁸⁹

The new CEO of FTX, John Ray III, said that he had never seen "such a complete failure of corporate controls and such a complete absence of trustworthy financial information".⁹⁰

Mr Bankman-Fried was arrested in the Bahamas in December 2022 for "lying to investors and committing fraud". The American authorities have since filed further charges.⁹¹

⁸⁴ "[Why Did FTX Collapse? Here's What to Know](#)", New York Times [£], 10 November 2022 (accessed 8 February 2023)

⁸⁵ "[The Epic Collapse of Sam Bankman-Fried's FTX Exchange: A Crypto Markets Timeline](#)", CoinDesk, 15 November 2022 (accessed 8 February 2023)

⁸⁶ "[Divisions in Sam Bankman-Fried's Crypto Empire Blur on His Trading Titan Alameda's Balance Sheet](#)", CoinDesk, 2 November 2022 (accessed 8 February 2023)

⁸⁷ "[Why Did FTX Collapse? Here's What to Know](#)", New York Times [£], 10 November 2022 (accessed 8 February 2023)

⁸⁸ "[Binance ditches deal to rescue rival crypto exchange FTX](#)", Financial Times [£], 10 November 2022 (accessed 8 February 2023)

⁸⁹ "[The Epic Collapse of Sam Bankman-Fried's FTX Exchange: A Crypto Markets Timeline](#)", CoinDesk, 15 November 2022 (accessed 8 February 2023)

⁹⁰ "[New FTX chief says crypto group's lack of control worse than Enron](#)", Financial Times [£], 18 November 2022 (accessed 8 February 2023)

⁹¹ "[The Epic Collapse of Sam Bankman-Fried's FTX Exchange: A Crypto Markets Timeline](#)", CoinDesk, 15 November 2022 (accessed 8 February 2023)

3 Policy and regulatory responses

3.1 An overview of UK policy development

Most UK policy and regulatory responses to cryptocurrencies have emerged since 2018.⁹²

Since then, they have developed based on a desire to balance risks to consumers and the financial system against the possibilities for innovation.

UK policy has been informed by increased knowledge and understanding of the issues involved, as well as developments within the sector itself.⁹³ As set out in [box 3 below](#), UK policy initially focused on determining the broad priorities and responsibilities for intervention.⁹⁴ More recently it has emphasised a desire to apply “proportionate” and “flexible” regulation. This intends not only to protect consumers and businesses, but also to promote the UK’s financial services industry.⁹⁵

The Kalifa Review 2021

In 2020, the Government commissioned the entrepreneur Ron Kalifa to explore “objectives for supporting the growth and widespread adoption of UK fintech, and for maintaining the UK’s global fintech reputation.”⁹⁶ The Kalifa Review was published in April 2021.

Among its wider recommendations, the Kalifa Review advocated introducing a new regime for the regulation of cryptoassets. Ron Kalifa argued that “[t]he UK has the potential to be a leading global centre for the issuance, clearing, settlement, trading and exchange of crypto and digital assets.” But he warned that the UK should act quickly to maintain what he saw as its “strong position”, given the emergence of rival strategies, notably in the EU.

Ron Kalifa stressed the potential for a flexible, “innovation-driven” approach. He noted that while consumers would be likely to benefit from “enforceable

See the Commons Library briefing [Fintech: a guide to financial technology](#) for further information about the Kalifa Review and wider policy.

⁹² Notable exceptions to this were the HMRC’s [guidance on the tax treatment of cryptocurrencies](#) issued in 2014, and [consumer warnings issued by the FCA](#) in 2017.

⁹³ See, for instance, Bank of England, “[The future of money](#)”, 2 March 2018

⁹⁴ See, for instance, HM Treasury, Financial Conduct Authority and the Bank of England, [Cryptoassets Taskforce: Final report](#), October 2018.

⁹⁵ See, for instance, HM Treasury, [Future financial services regulatory regime for cryptoassets: Consultation and call for evidence](#), 1 February 2023, and HM Treasury, [The Kalifa Review of UK FinTech](#), 16 April 2021.

⁹⁶ HM Treasury, [The Kalifa Review of UK FinTech](#), 16 April 2021

regulatory standards”, many in the crypto industry “would positively welcome the opportunity to be regulated.”⁹⁷

A vision of the UK as a global crypto hub

Building on the Kalifa Review, in April 2022 the Government announced its plan “to make the UK a global cryptoasset technology hub” and set out a range of actions to support this. In relation to cryptocurrencies specifically, the Government referred to its intention to “see stablecoins recognised as a valid form of payment”.⁹⁸ Those plans were set out in the Financial Services and Markets Bill 2022-23, as discussed in [section 3.4](#) of this briefing.

In February 2023 the Government launched a further consultation on a wider regime for regulating cryptoassets. See [section 3.5](#) of this briefing for more detail.

3 Which bodies lead on regulation?

In 2018, the Treasury, the Bank of England and the Financial Conduct Authority set up the Cryptoassets Taskforce to consider whether and how the emerging area should be regulated, and who should lead. The Taskforce focused on mitigating risks and preventing “illicit activity”. It allocated the main areas as follows. This basic division of responsibilities continues.

- The FCA would lead on regulating “cryptoasset activities” and how to protect consumers, including through restricting the sale of certain cryptoassets.
- HM Revenue and Customs (HMRC) would lead on anti money laundering policies, but the FCA would apply this to the crypto sector.
- HMRC would revise and maintain tax treatment of cryptoassets and the sector.
- All the financial regulators (including the Bank of England) would continue to monitor developments and liaise with relevant international bodies.⁹⁹

More recent initiatives – notably the proposal to regulate certain stablecoins (see [section 3.4](#)) – would involve the Bank of England, the Prudential Regulation Authority and the Payment Systems Regulator.

⁹⁷ HM Treasury, [Kalifa Fintech Review: Final report](#), 16 April 2021, p30

⁹⁸ HM Treasury, [Government sets out plan to make UK a global cryptoasset technology hub](#), 4 April 2022

⁹⁹ HM Treasury, FCA and the Bank of England, [Cryptoassets Taskforce: Final report](#), October 2018

3.2

Regulation by the Financial Conduct Authority

The FCA generally refers to cryptocurrencies as “cryptoassets”, “exchange tokens” or “unregulated tokens”.

The regulatory perimeter

The FCA has some regulatory oversight of cryptoassets.¹⁰⁰ In line with its other responsibilities, its approach and authority are delimited by its wider “regulatory perimeter”.¹⁰¹

While the FCA regulates some very specific types of cryptoassets, it considers that cryptocurrencies themselves fall outside the regulatory perimeter.¹⁰² It notes that some financial service **activities** carried out within the sector might be covered by other areas of its regulatory authority. The FCA is also responsible for **supervising** the anti money laundering regime as it applies to crypto businesses, such as exchanges.¹⁰³ But this does not mean that such businesses are **regulated** or **authorised** by the FCA.¹⁰⁴

The FCA has a wider responsibility for protecting consumers. This means that while it may not be able to step in to take action in areas outside its regulatory perimeter, it can highlight areas of potential consumer harm.¹⁰⁵

Protecting consumers

An important focus of the FCA’s response to cryptoassets has been to issue cautions to consumers about the risks involved in such investments, including:

- Most forms of cryptoassets –and particularly cryptocurrencies – are not regulated, and consumers will generally not have redress from the Financial Ombudsman Service or the Financial Services Compensation Scheme.
- Consumers should regard such investments as high-risk and speculative, and be prepared to lose all their money.
- Consumers should ensure that they use registered cryptoassets businesses (see “[Registering cryptoasset businesses](#)”, below) for any investments they make.

¹⁰⁰ FCA, [Cryptoassets: our work](#), 12 August 2022 (accessed 24 January 2023)

¹⁰¹ FCA, [Our perimeter](#), 19 July 2022 (accessed 24 January 2023)

¹⁰² The FCA does however regulate one type of cryptoasset, “security tokens”, on the basis that they “are the same as or akin to traditional instruments like shares, debentures or units in a collective investment scheme”. See FCA, [Guidance on Cryptoassets: Feedback and Final Guidance to CP 19/3: Policy Statement CP19/22](#), (accessed 10 February 2023), p15-16.

¹⁰³ FCA, [Guidance on Cryptoassets: Feedback and Final Guidance to CP 19/3: Policy Statement CP19/22](#), (accessed 24 January 2023), p6

¹⁰⁴ As set out in sections 3.4 and 3.5, the Government is legislating on **regulating** some stablecoins and consulting on **authorising** certain crypto businesses and so bringing them into the perimeter.

¹⁰⁵ FCA, “[Protecting consumers](#)”, 19 July 2022 (accessed 10 February 2023)

- Many fraudsters and scammers have targeted the cryptoasset market.¹⁰⁶

Forthcoming powers over marketing cryptocurrencies

Following a consultation, in January 2022, the Government announced that it would bring certain unregulated cryptoassets (including cryptocurrencies) into the scope of the Financial Promotions Order, through which the FCA regulates the way that certain investment products and services are marketed to consumers.¹⁰⁷

It referred to the rise in ownership of cryptoassets and continued limited consumer understanding of the risks involved (see [section 2.5](#)).¹⁰⁸ It intends to focus on trading cryptoassets rather than “custody services” (including wallets and exchanges), as it considered the former to be “the central activities causing consumer harm.”¹⁰⁹

The Treasury expects to lay relevant secondary legislation in 2023 to implement the new approach.¹¹⁰ It has also said that it would introduce a temporary “bespoke exemption” to allow crypto businesses registered under the money laundering regulations (see [below](#)) to promote their own services. This is because the Financial Promotions Order requires firms **authorised** by the FCA to oversee such promotions, and few UK firms dealing in crypto are as yet authorised.¹¹¹

Sarah Pritchard, Executive Director for Markets at the FCA, told the Treasury Committee that the new regime would apply to financial promotions made to consumers in the UK, whatever the location of the advertiser.¹¹²

Restricting the sale of certain financial products to consumers

The FCA permanently banned the retail sale of derivatives referencing cryptoassets from January 2021.¹¹³ The FCA highlighted what it saw as the risks involved in the cryptoasset market in general as well as “inadequate understanding” of such products by retail customers. It said that there was in any event no “clear investment need” for them.¹¹⁴

¹⁰⁶ Financial Conduct Authority, [Cryptoassets](#), 23 May 2022 (accessed 24 January 2023)

¹⁰⁷ HM Treasury, [Cryptoasset promotions: Consultation](#), July 2020, p3

¹⁰⁸ As above HM Treasury, [Cryptoasset promotions: Consultation response](#), January 2022, p9

¹⁰⁹ [As above](#), p14

¹¹⁰ HM Treasury, [Future financial services regulatory regime for cryptoassets: Consultation and call for evidence](#), 1 February 2023, p21

¹¹¹ HM Treasury, “[Government approach to cryptoasset financial promotions regulation policy statement](#)”, 1 February 2023

¹¹² Treasury Committee, [Oral evidence: The crypto-asset industry](#), HC 615, 7 December 2022, Q163-164

¹¹³ Derivatives are a type of financial instrument whose value depends entirely on that of an underlying asset. In wider financial trading they include contracts that, for instance, refer to the value of shares or fiat currencies.

¹¹⁴ FCA, [PS20/10: Prohibiting the sale to retail clients of investment products that reference cryptoassets](#), 9 October 2020 (accessed 24 January 2023)

Registering cryptoasset businesses

The FCA is responsible for applying money laundering regulations to a range of financial service businesses, including cryptocurrency exchanges and wallet providers.¹¹⁵ All such businesses were required to register with the FCA and to apply the wider money laundering regulations (MLRs). These place a range of requirements on registered businesses, including customer due diligence checks.¹¹⁶

The FCA required businesses to apply for registration by 15 December 2020 in order to be permitted to trade beyond 10 January 2021. It implemented a temporary registration regime (TRR) to allow applicants to continue trading through the registration process.¹¹⁷

It also maintains a list of “UK businesses that appear to be carrying on cryptoasset activity that are not registered with the FCA for anti-money laundering purposes.”¹¹⁸

Continuing delays to the registration process

In the event, though, the registration exercise has been fraught with delays. In June 2021, the FCA extended the deadline of the temporary regime from July 2021 to 31 March 2022. It said that a “significantly high number of businesses are not meeting the required standards”, a situation that had led to “an unprecedented number of businesses withdrawing their applications.”¹¹⁹

The Treasury Committee’s report on Economic Crime, published in February 2022, noted that 90% of firms had withdrawn their applications. It also said that it was unclear what sanctions unregistered businesses that continued to trade might face, and that publishing details of unregistered businesses might indeed be “helpful to criminals”.¹²⁰ The Committee agreed that while rigorous processes were essential, progress with registration had been “unacceptable”. It called on the Government and the FCA to “find a solution”.¹²¹

In response, the Government noted that it was a criminal offence to run such services without being registered with the FCA, which was in turn “responsible for policing the regulatory perimeter, and is empowered to bring both civil

¹¹⁵ FCA, [Guidance on Cryptoassets: Feedback and Final Guidance to CP 19/3: Policy Statement CP19/22](#), (accessed 24 January 2023), p10

¹¹⁶ For further detail about the MLRs, see HM Revenue and Customs, [Anti money laundering supervision: detailed information](#), and [Money Laundering and Terrorist Financing \(Amendment\) Regulations 2019, SI 2019/1511](#).

¹¹⁷ FCA, [Cryptoassets: AML/CTF regime: Register with the FCA](#), 24 January 2022 (accessed 25 January 2023)

¹¹⁸ FCA, [Unregistered Cryptoasset Businesses](#) (accessed 25 January 2023)

¹¹⁹ FCA, [Temporary Registration Regime extended for cryptoasset businesses](#), 3 June 2021 (accessed 25 January 2023)

¹²⁰ Treasury Committee, [Economic Crime: Eleventh Report of Session 2021-22](#), HC145, 2 February 2022, para 201-203

¹²¹ [As above](#), para 204

and criminal enforcement actions against persons who are in breach of this requirement.”¹²²

The Chief Executive of the FCA, Nikhil Rathi, confirmed that the FCA had closed the TRR on 1 April 2022. He reiterated the importance of robust requirements for registration, which 80% of applicants had not met. He added that the FCA was willing to work with those firms – many of which “were not used to regulation and, in some cases, reluctant to cooperate” – to help them meet the requirements. He said that as a result, 33 firms were registered.¹²³

Nevertheless, in a Westminster Hall debate on 25 January 2023, Lisa Cameron, Chair of the Crypto and Digital Assets All Party Parliamentary Group, highlighted the issue as a “barrier”, with firms complaining of continued delay and lack of communication on the part of the FCA.¹²⁴ The Economic Secretary, Andrew Griffith, acknowledged the importance of “speed and agility” in regulatory decision-making. He announced that 41 firms were now registered.¹²⁵

To assist applicants, the FCA published “feedback on good and poor quality applications” for registration in January 2023.¹²⁶

Updates to the Money Laundering Regulations

In August 2022 the FCA introduced a further requirement for any individual or entity to seek its approval before becoming a “controller” of any UK-registered cryptoasset business.¹²⁷ As explained by the law firm Morgan Lewis, this would apply to any “[legal] person that owns more than 25% of the shares or voting rights in the business, or otherwise has significant influence or control over the business or its management.” It suggested that this approach closed a loophole that would have enabled criminal activity to take place before the FCA could respond.¹²⁸

From 1 September 2023, cryptoasset businesses in the UK will also be required to collect and share information about the senders and recipients of transactions.¹²⁹ This requirement is commonly known as the “travel rule” and arises from a recommendation made by the Financial Action Task Force.¹³⁰

¹²² Treasury Committee, Economic Crime: responses to the Committee’s Eleventh Report: Eighth Special Report of Session 2021–22, HC1261, 28 April 2022, [Appendix 1: response from HM Treasury](#)

¹²³ As above, [Appendix 2: response from the Financial Conduct Authority](#)

¹²⁴ WH Deb, 25 January 2023, [c305WH](#)

¹²⁵ As above, [c304WH](#)

¹²⁶ FCA, “[Cryptoasset AML/CTF regime: feedback on good and poor quality applications](#)”, 25 January 2023 (accessed 1 February 2023)

¹²⁷ FCA, [Change in control: notification forms](#), 23 December 2022 (accessed 25 January 2023)

¹²⁸ Morgan Lewis, [Change in Control Regime for UK Cryptoasset Businesses](#), 14 September 2022 (accessed 25 January 2023)

¹²⁹ [The Money Laundering and Terrorist Financing \(Amendment\) \(No. 2\) Regulations 2022, SI 2022/860](#)

¹³⁰ For background, see FATF, [Targeted Update on Implementation of FATF’s Standards on VAs and VASPs](#), March 2022.

3.3 Tax arrangements

HM Revenue and Customs (HMRC) first issued guidance on cryptocurrencies in 2014. That considered tax arrangements for what was still seen as an emerging area. It referred to “Bitcoin and other cryptocurrencies” and said that policy would develop over time.¹³¹

The final report from the Cryptoassets Taskforce noted that while tax arrangements were not in its scope, HMRC and the Treasury were cooperating closely to address the issues raised, particularly in relation to tax avoidance and evasion.¹³²

HMRC published more detailed guidance for businesses and individuals in December 2018. That was incorporated into a more comprehensive Cryptoassets Manual in March 2021, which has been updated ever since.¹³³

HMRC does not regard exchange tokens (cryptocurrencies) as money, but rather primarily as a type of investment. For both businesses and individuals, profits from transactions are subject to tax and must be declared. Individuals disposing of cryptoassets may need to pay Capital Gains Tax;¹³⁴ they may have to pay income tax and National Insurance contributions if they’re paid in cryptoassets.¹³⁵ Businesses may also be subject to a range of taxes, including Corporation Tax, Stamp Duty and VAT.¹³⁶

The nature of cryptoassets – notably their ‘statelessness’ and changing value – can complicate calculations of tax liabilities. HMRC guidance says that it regards the residency of the beneficial owner of an exchange token as the location of that asset for tax purposes.¹³⁷ But the Society of Trust and Estate Practitioners (an international professional body) argued in a 2021 guidance note that this approach had neither been set out in legislation nor tested by the courts, and appeared to conflict with other approaches to determining the tax location of intangible assets in English law.¹³⁸

Representatives of the crypto industry highlighted complexities of tax arrangements to the Treasury Committee’s continuing Inquiry into the Crypto Industry (see [section 4.6](#)) in November 2022. They noted that different

¹³¹ HMRC, [Revenue and Customs Brief 9 \(2014\): Bitcoin and other cryptocurrencies](#), 3 March 2014

¹³² HM Treasury, FCA and the Bank of England, [Cryptoassets Taskforce: Final report](#), October 2018, p33

¹³³ HMRC, [Cryptoassets manual](#), 3 November 2022 (accessed 27 January 2023)

¹³⁴ HMRC, [Check if you need to pay tax when you sell cryptoassets](#), 19 December 2018 (accessed 27 January 2023)

¹³⁵ HMRC, [Check if you need to pay tax when you receive cryptoassets](#), 19 December 2018 (accessed 27 January 2023)

¹³⁶ HMRC, [Cryptoassets for businesses: which taxes apply](#), 3 November 2022 (accessed 27 January 2023), para 40050

¹³⁷ HMRC, [Cryptoassets for individuals: Capital Gains Tax: determining the location of exchange tokens](#), 3 November 2022 (accessed 27 January 2023), para 22600

¹³⁸ Society of Trust and Exchange Practitioners, [STEP Guidance Note: Location of Cryptocurrencies – an alternative view \(pdf\)](#), 3 September 2021 (accessed 27 January 2023)

government departments treated cryptoassets in inconsistent ways. Ian Taylor, Executive Director of Crypto UK, said that reporting gains to HMRC was “over-burdensome” and called for a more “user-friendly” approach.¹³⁹

3.4

Legislation in progress

Regulating stablecoins

The Library briefing [Financial Services and Markets Bill 2022-23](#) has more detail about this and related proposals.

Through clauses 21 and 22 of the Financial Services and Markets Bill 2022-23, the Government aims to bring some stablecoins into the regulatory perimeter, at least when they are used as a means of payment.¹⁴⁰ The Bill began Lords Committee Stage on 25 January 2023.¹⁴¹

In a consultation launched in January 2021, the Government noted that while most types of cryptoassets fell outside the regulatory perimeter and would continue to do so, some types – notably stablecoins – might become attractive as a widespread means of payment, notably in cross-border payments. It argued that this could present risks to consumers and wider financial stability if not adequately regulated.¹⁴²

The Bill would give the Treasury powers to give regulators (the FCA, the Bank of England, the Prudential Regulation Authority and the Payment Systems Regulator) oversight of stablecoins and similar cryptoassets. It describes them as “digital settlement assets”.¹⁴³

The Government’s 2023 consultation on a wider regulatory regime for cryptoassets (see [section 3.5](#)) says that the provisions in the Bill would be applied to stablecoins backed by fiat currencies. That consultation would go on to consider how to deal with other types of stablecoin.¹⁴⁴

Ian Taylor, Executive Director of CryptoUK, said that it would be important to clarify what would be included in the secondary legislation. He wanted the Government to engage with the industry to ensure that arrangements were “practical” and “fit for purpose”.¹⁴⁵

¹³⁹ Treasury Committee, [Oral evidence: The crypto-asset industry](#), HC 615, 14 November 2022, Q80-84

¹⁴⁰ See Commons Library briefing [Financial Services and Markets Bill 2022-23 \(CBP 9594\)](#), 30 November 2022, p30-32

¹⁴¹ UK Parliament, [Financial Services and Markets Bill](#)

¹⁴² HM Treasury, [UK regulatory approach to cryptoassets and stablecoins: Consultation and call for evidence](#), January 2021, p3

¹⁴³ See Commons Library briefing [Financial Services and Markets Bill 2022-23 \(CBP 9594\)](#), 30 November 2022, p30-32

¹⁴⁴ HM Treasury, [Future financial services regulatory regime for cryptoassets: Consultation and call for evidence](#), 1 February 2023, p25-26

¹⁴⁵ Treasury Committee, [Oral evidence: The crypto-asset industry](#), HC 615, 14 November 2022, Q36

In the Bill's second reading in the Commons on 7 September 2022, Peter Grant (SNP) welcomed the provisions relating to digital settlement assets.¹⁴⁶

In the Lords on 10 January 2023, Lord Cromwell (Cross-bencher) cautioned that some stablecoins “have proved to be far from stable” and stressed the importance of tests to determine that such an asset was worthy of being referred to as a stablecoin.¹⁴⁷

Criminal and civil asset recovery powers

Part 4 of the Economic Crime and Corporate Transparency Bill 2022-23, which passed its second reading in the Lords on 8 February 2023¹⁴⁸, would explicitly extend criminal and civil asset recovery powers to cryptoassets. Among other provisions, it would clarify how search, seizure and detention powers apply to cryptoasset wallets. It would also allow such wallets to be frozen, and their contents to be converted into fiat currency and destroyed, if necessary.¹⁴⁹

In setting out the need for the legislation, the Government said that criminals were increasingly using cryptoassets to “move and launder profits” from a range of crimes. It also said that there was “an increased risk” that terrorists could use cryptoassets to “raise and move funds”. It particularly emphasised the reliance on cryptoassets in payment demands after ransomware attacks. More widely, the Bill would include provisions to allow for its definition of “cryptoasset” – “a store of value which can be transferred or exchanged digitally and are secured cryptographically” – and associated terms to be refined as and when the technology develops.¹⁵⁰

At the Bill's second reading in the Commons on 13 October 2022, the shadow Home Secretary, Yvette Cooper, said that the Opposition welcomed the measures.¹⁵¹

See the Library briefing [Economic Crime and Corporate Transparency Bill 2022-23: Progress of the Bill](#) for more information.

3.5

Consultation on a future regulatory regime

The Government published a further consultation and call for evidence on a future financial services regime for cryptoassets on 1 February 2023. The consultation will run until 30 April 2023.¹⁵²

¹⁴⁶ HC Deb 7 September 2022, [c293](#)

¹⁴⁷ HL Deb 10 January 2023, [c1345](#)

¹⁴⁸ HL Deb, 8 February 2023, [c1025](#)

¹⁴⁹ Commons Library briefing, [Economic Crime and Corporate Transparency Bill 2022-23: Progress of the Bill \(CBP-9625\)](#), p8

¹⁵⁰ BEIS, HM Treasury, Home Office, Ministry of Justice, Serious Fraud Office, [Factsheet: cryptoassets – legislation](#), 18 January 2023

¹⁵¹ HC Deb, 13 October 2022, [c292](#)

¹⁵² HM Treasury, [Future financial services regulatory regime for cryptoassets: Consultation and call for evidence](#), 1 February 2023, p21

Andrew Griffith, the Economic Secretary, said that the Government’s objective was for the eventual framework to “[enable] firms to innovate at pace, while maintaining financial stability and clear regulatory standards.” He referred to “[o]ngoing turbulence” in the sector, including the recent collapse of FTX, as well as the continuing regulatory initiatives discussed earlier in this section. He hoped that “effective regulation” would allow cryptoasset businesses “to thrive in the UK, and give people and businesses the confidence to invest with an understanding of the often high risks involved.”¹⁵³

Overall principles and arrangements

The consultation explains that its proposals are designed on specific principles, which sought to:

- seek similar regulatory outcomes for similar risks, regardless of the technology involved
- be “proportionate and focused”, and so target the most “urgent or acute” needs
- be flexible enough to respond to emerging and changing needs and market developments¹⁵⁴

It describes the current initiatives on regulating stablecoins and crypto advertising (discussed earlier in this section) as “Phase 1”. The Government intends to implement further regulation on at least some of the areas being consulted on as “Phase 2” – the principles outlined above would help to determine priorities.¹⁵⁵

Overall, the Government proposes to bring a range of activities under the FCA’s wider general regulatory regime. Firms registered under the money laundering regulations (see [section 3.2](#)) would have to apply for authorisation to undertake further specified activities, although the consultation notes that the FCA would try to develop an efficient process to enable this.¹⁵⁶

It notes, though, that the “borderless” and online nature of much of the industry presents challenges for regulators. The Treasury wants regulation from Phase 2 to cover “activities provided **in or to** the United Kingdom”. This might require providers to set up subsidiaries in the UK and/or the Treasury to establish equivalence arrangements.^{157 158}

¹⁵³ HM Treasury, [Future financial services regulatory regime for cryptoassets: Consultation and call for evidence](#), 1 February 2023, p5

¹⁵⁴ [As above](#), p10-11

¹⁵⁵ [As above](#), p11-12

¹⁵⁶ [As above](#), p20

¹⁵⁷ “Equivalence arrangements” refers to situations where UK regulators would not require UK authorisation for a firm if it was already authorised and required to meet similar regulatory standards in another jurisdiction.

¹⁵⁸ [As above](#), p25-26

Main proposals for specific activities

Among other proposals:

- Firms trading in cryptoassets would need to be authorised by the FCA and to comply with a range of regulatory standards.¹⁵⁹
- Firms would have to ensure that they have undertaken due diligence about the nature of any cryptoasset they wish to trade in and set out any compensation arrangements for misinformation or fraud.¹⁶⁰
- Providers of custody services (such as wallets) would need to have adequate systems to safeguard customers' investments from such risks as hacking and offer clear processes for redress" in the event of such loss. Investments would need to be protected if the firm became insolvent.¹⁶¹
- The industry would be expected to lead on establishing an understanding of what constitutes market abuse and to developing practices to identify and disrupt it.¹⁶²

3.6

Wider Parliamentary consideration

Most Parliamentary consideration of issues relating to cryptocurrencies has taken place within the Treasury Committee. There is also a Crypto and Digital Assets All Party Parliamentary Group (APPG) (see also below) and another APPG that covers Blockchain.

In November 2022, Lisa Cameron, Chair of the Crypto and Digital Assets APPG and an SNP Member, said that she expected crypto to "remain a nonpartisan issue". She thought that Members across parties were coming around to a view that crypto "is an area of innovation, technology and of real dynamism for the future", so the general approach would be unlikely to change "no matter who is in government now or in the future".¹⁶³

There have been two debates relating to cryptoassets in Westminster Hall, both led by SNP Members: the first led by Martin Docherty-Hughes on 7 September 2022,¹⁶⁴ and the second by Lisa Cameron on 25 January 2023.¹⁶⁵ Both debates were characterised by general consensus on the wider policy

¹⁵⁹ HM Treasury, [Future financial services regulatory regime for cryptoassets: Consultation and call for evidence](#), 1 February 2023, p41-44

¹⁶⁰ [As above](#), p34-40

¹⁶¹ [As above](#), p49-51

¹⁶² [As above](#), p54-58

¹⁶³ "[UK's Crypto Future Is Bright No Matter Who's in Charge, Lawmaker Says](#)", CoinDesk, 10 November 2022 (accessed 1 February 2023)

¹⁶⁴ WH Deb, 7 September 2022, [c77-99WH](#)

¹⁶⁵ WH Deb, 25 January 2023, [c300-305WH](#)

approach of balancing consumer protection and financial stability against supporting innovation.

Treasury Committee Inquiry, 2018

In 2018 the Treasury Committee undertook an Inquiry into Digital Currencies.¹⁶⁶ The Inquiry concluded that the “ambiguity” of Government oversight was unsustainable and called for regulation of the “Wild West” cryptoasset market. As well as benefiting customers, such regulation might allow the UK to become a “global centre for crypto-assets.”¹⁶⁷

John Glen, then Economic Secretary to the Treasury, replied on behalf of the Government and the Financial Conduct Authority in December 2018. He said that the Government “shared the Committee’s concerns”, but also noted the potential for innovation.¹⁶⁸ Most importantly, he was able to refer to the actions and proposals of the Cryptoassets Taskforce.

Treasury Committee Inquiry, 2022-23

In July 2022, the Treasury Committee launched its second Inquiry into the Crypto-Assets Industry. Its overall scope is similar to that of the 2018 Inquiry, focusing on opportunities and risks, potential offered by distributed ledger technology, and how to maintain a balanced regulatory response.¹⁶⁹

The Inquiry’s call for evidence did however reflect developments and emerging themes in the industry, including stablecoins, a potential central bank digital currency, how regulation might support the development of start-ups while mitigating risks, environmental considerations, and a review of the effectiveness of Government and regulatory efforts to date.¹⁷⁰

All-Party Parliamentary Group

The Crypto and Digital Assets All Party Parliamentary Group (APPG) brings together “parliamentarians, regulators, Government and industry to discuss the challenges and opportunities relating to the crypto sector and to explore the need for future regulation of the sector.” It is chaired by Lisa Cameron.¹⁷¹

The APPG launched its own inquiry into the UK crypto sector in August 2022. This is focusing on regulation (particularly in light of the Government’s

¹⁶⁶ UK Parliament, [Digital currencies inquiry launched](#), 22 February 2018. The Inquiry later changed “Digital Currencies” in its title to “Crypto-assets”.

¹⁶⁷ UK Parliament, [“Wild West” crypto-assets should be regulated](#)”, 19 September 2018

¹⁶⁸ Treasury Committee, [Government and Financial Conduct Authority Responses to the Committee’s Twenty-Second Report: Crypto-assets: Eighth Special Report of Session 2017-19](#)

¹⁶⁹ UK Parliament, [Call for evidence: The crypto-asset industry](#)

¹⁷⁰ [As above](#)

¹⁷¹ All-Party Parliamentary Group on Crypto and Digital Assets, [“What is the APPG?”](#) (accessed 13 February 2023)

intention to make the UK a crypto hub), risks to consumers and economic crime, and progress towards a central bank digital currency.¹⁷²

¹⁷² All-Party Parliamentary Group on Crypto and Digital Assets, [Crypto Inquiry 2022](#) (accessed 20 January 2023)

4 International approaches

The statelessness of most of the cryptocurrency industry brings new challenges to national and international regulators.

4.1 International cooperation

As noted in [section 3.1](#), the UK Government and financial regulators liaise with other national and international authorities on matters relating to cryptoassets.

The Financial Action Task Force

The Financial Action Task Force (FATF) is an international organisation that “leads global action to tackle money laundering, terrorist and proliferation financing.” It sets international standards for governments to adopt to help combat crime and terrorism.¹⁷³

The FATF refers to cryptoassets as “virtual assets”. As part of its wider role it has published and updated guidance for governments on implementing a risk-based approach for overseeing cryptoassets and associated businesses¹⁷⁴, as well as annual reviews of progress.¹⁷⁵

The FATF’s guidance has directly influenced UK policy, notably in arrangements for registering cryptoasset businesses and the implementation of the “travel rule” from September 2023, as discussed in [section 3.2](#) of this briefing.

The Financial Stability Board

The Financial Stability Board (FSB) is an international agency that “seeks to strengthen financial systems and increase the stability of international financial markets.”¹⁷⁶

The FSB ran a consultation on the cryptoasset industry between October and December 2022. It proposed recommendations to “promote the consistency

¹⁷³ FATF-GAFI, “[The FATE](#)” (accessed 13 February 2023)

¹⁷⁴ FATF, [Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers](#), October 2021 (accessed 13 February 2023)

¹⁷⁵ FATF, [Second 12-Month Review of Revised FATF Standards on Virtual Assets and VASPs](#), 5 July 2021 (accessed 13 February 2023)

¹⁷⁶ Financial Stability Board, “[About the FSB](#)”, 16 November 2020 (accessed 13 February 2023)

and comprehensiveness” of national regulation of cryptoasset markets, as well as to manage the potential risks to financial security arising from stablecoins.¹⁷⁷

4.2 National responses

National governments around the world have responded to the emergence of cryptoassets in different ways and at different times, although the efforts of the FATF are leading to wider coordination. That said, in July 2021 the FATF reported that of the 128 jurisdictions that report to it, 52 had implemented its recommendations on crypto service providers, 6 had banned such businesses altogether, and 70 were yet to do so.¹⁷⁸

Given the pace of change in the field, there is no absolutely reliable overview of regulations in place around the world. Comply Advantage, a US online security company, does however maintain a website with an overview of current and developing regulation across many jurisdictions around the world.¹⁷⁹

¹⁷⁷ Financial Stability Board, “[FSB proposes framework for the international regulation of crypto-asset activities](#)”, 11 October 2022 (accessed 13 February 2023)

¹⁷⁸ FATF, [Second 12-Month Review of Revised FATF Standards on Virtual Assets and VASPs](#), 5 July 2021 (accessed 13 February 2023)

¹⁷⁹ Comply Advantage, [Cryptocurrency Regulations Around The World](#) (accessed 13 February 2023)

Appendix: Terminology

Defining cryptoassets

Defining ‘cryptoassets’ and the various sub-types of them is a challenge in itself, because technology and applications have developed over time. In 2022, the Government inserted the following definition into the Financial Services and Markets Bill:

“cryptoasset” means any cryptographically secured digital representation of value or contractual rights that—

(a) can be transferred, stored or traded electronically, and

(b) that [sic] uses technology supporting the recording or storage of data (which may include distributed ledger technology).

The next paragraph would give the Treasury the power to change that definition.¹⁸⁰

Types of cryptoasset

In 2018, UK regulators identified three types of cryptoasset:

- **Exchange or unregulated tokens:** The cryptocurrencies that are the focus of this briefing paper. They are used for exchange or investment.
- **Security tokens:** ‘Specified investments’ that give some rights of ownership or rights to payment and may be transferable. Because of this they are regulated by the Financial Conduct Authority.
- **Utility tokens:** Give rights of current or future redemption of a product or service.¹⁸¹

The Treasury identified a fourth main class in 2023:

- **Non-fungible tokens (NFTs):** Give rights of digital ownership, such as a unique piece of art. They are not related to cryptocurrencies.¹⁸²

The 2023 [consultation on a new regulatory regime](#) includes further discussion and definitions.

¹⁸⁰ [Financial Services and Markets Bill](#) [as brought from the Commons], clause 65, subsection 4

¹⁸¹ HM Treasury, FCA, [Cryptoassets Taskforce: final report](#), October 2018, p16-17

¹⁸² HM Treasury, [Future financial services regulatory regime for cryptoassets: Consultation and call for evidence](#), 1 February 2023, p13-14

Glossary

Bitcoin: The first and best-known cryptocurrency, launched in 2009. It remains the model of a decentralised cryptocurrency.

Blockchain: The consolidated and immutable record of all confirmed transactions on a distributed ledger. It is typically publicly available.

Decentralised cryptocurrency: A cryptocurrency (most notably Bitcoin) that functions entirely according to an algorithm, without human intervention.

Distributed ledger technology (DLT): The alternative accounting system used in cryptocurrencies, in which transactions are confirmed and recorded multiple times before being recorded on a blockchain. In traditional accounting, transactions are generally only recorded in the accounts of the parties to that transaction.

Fiat currency: A currency (such as sterling, euros or US dollars) whose value is maintained through confidence in accountable governments and central banks.

Proof of stake: An approach to validating distributed ledger transactions in which a determined number of validators agree to confirm transactions. They “stake” a certain amount of crypto holdings for the right to participate and are rewarded in the relevant cryptocurrency for their efforts. It is a less energy-intensive approach than proof-of-work.

Proof of work: An approach to validating distributed ledger transactions in which a limitless number of participants (or ‘miners’) compete to solve a complex mathematical puzzle and complete a block of transactions. The successful miner is rewarded in new coin. This is the approach used by Bitcoin and is very energy-intensive.

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