

# Evidence- Financial Conduct Authority (DGC0028)

## **Financial Conduct Authority's written submission on digital currencies**

**The role of digital currencies in the UK, including the opportunities and risks digital currencies may bring to consumers, businesses and the Government (and associated bodies).**

1. Crypto-assets emerged with the Bitcoin network coming into existence in 2009, which was originally designed as a peer-to-peer electronic cash system allowing individuals to transact directly without a financial institution. Instead of using a centralised third-party to transact - such as a bank - individuals could use a decentralised network of computers using cryptography to secure transfers.
2. Technical limitations have meant that crypto-assets have not been able to scale-up to meaningfully rival the existing payment infrastructure. However, the crypto-asset market is developing at pace with over 1500 different coins and tokens valued at around \$311bn.<sup>1</sup> Each of these displays a wide variety of different characteristics - some similar to Bitcoin, others entirely unique. The relatively low barriers to entry and potential to attract high-levels of speculative investment have fuelled the launch of hundreds of different projects and ideas. We anticipate that as these progress, they will supersede the existing technical bottlenecks; either by launching entirely new crypto-assets or by developing secondary services on top of existing crypto-asset networks. This is likely to result in reduced transaction times and fees in the foreseeable future.

### **The FCA Regulatory perimeter**

3. Crypto-assets themselves (i.e. those designed primarily as a means of payment/exchange) are generally not within the scope of FCA regulation.<sup>2</sup> Transferring, buying and selling of crypto-assets, including the commercial operation of crypto-asset exchanges, will also typically fall outside the FCA's regulatory perimeter.
4. Crypto-asset exchanges are businesses that allow customers to trade crypto-assets or digital currencies for other assets such as conventional fiat currency, or other digital currencies. 'Wallet providers' are in effect software programmes which store an individual's crypto-asset, by storing the private 'key' which enables the transfer of ownership.
5. The activities that require firms to comply with anti-money laundering (AML) obligations are set out in the Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017 (MLR). Crypto-asset exchange activities are not included in the MLR, which means that such firms are not currently subject to AML requirements. However, we are aware that the main crypto-asset exchanges do undertake some due diligence on their customers. The EU's Fifth Anti-

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<sup>1</sup> As valued on CoinMarketCap, last checked on 1.03.17

<sup>2</sup> They generally will not meet the criteria to be considered a specified investment under the Regulated Activities Order. Nor would they typically qualify as 'funds' or 'e-money' in Payments Services Directive 2 and E-money Regulation 2009. However, those which do have elements which make them akin to securities, or e-money, could constitute regulated investments or e-money for the purposes of the FCA perimeter.

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Money Laundering Directive (5AMLD) will be passed later this year with Member States expected to be required to transpose the directive by late 2019/early 2020<sup>3</sup>. This directive applies AML requirements for exchanges to/from virtual currencies, and for custodian wallet providers to comply with AML requirements.

6. The table below explains in more detail how the different forms of crypto-assets and products which may reference or relate to underlying crypto-assets, generally sit within our regulatory perimeter. It should be noted however that there are a wide variety of crypto-assets, often with different characteristics, and new models and types are regularly being created. Whether a crypto-asset (including crypto-tokens issued as part of an Initial Coin Offering) itself is capable of falling within the perimeter will, therefore, be fact specific depending on the particular crypto-asset instrument in question. We will continue to evaluate our position.

Product area	Within perimeter?	Typical use case
Crypto-assets as a medium of exchange	<b>NO</b>	Peer-to-peer payments, and investment assets, e.g. Bitcoin and Ethereum
Regulated payments services which use crypto-asset	<b>YES</b>	Intermediary in cross-border transactions, e.g. GBP - Bitcoin - USD transactions
Derivative instruments referencing crypto-assets	<b>YES</b>	Financial instrument to bet on price developments (CfDs) or to hedge a position (futures), e.g. CfD providers IG, Crypto Facilities and Plus500
Investment assets in crypto-assets	<b>YES</b>	Direct investments in crypto-asset, e.g. Swedish registered exchange traded notes
Tokens representing transferable security	<b>YES</b> <b>(<i>'security token'</i>)</b>	Distribution infrastructure for regulated products such as shares and bonds, e.g. issue of traditional shares on public blockchain. Also in the context of ICOs, when tokens amount to a transferable security, more akin to regulated equity-based crowdfunding.
Tokens representing a claim on prospective services or products	<b>NO</b> <b>(<i>'utility token'</i>)</b>	Tokens that do not amount to transferable securities or other regulated products and only allow access to a network or product. Can also be used as a fundraising mechanism akin to unregulated donation- and rewards-based crowdfunding, also in the context of ICOs.

<sup>3</sup> Whether the UK is legally required to transpose the amendments will depend on the negotiated outcome over the terms of the Implementation Period

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## **Benefits of crypto-assets for regulated financial activities**

7. Through our Innovate initiatives, including the Regulatory Sandbox and Techsprints, we have gathered hands-on experience with a wide range of crypto-asset applications. Of 60 sandbox firms, around a third have used a crypto-asset or distributed ledger technology which makes it the most popular technology employed in the Regulatory Sandbox.
8. From our work, we have identified three broad ways crypto-assets and the underlying technology could enhance the delivery of existing financial activities, namely: improving operational resilience by reducing single points of failure; using distributed digital transaction records to improve transparency; cost and time reductions arising from the removal of intermediaries required for processing a transaction.
9. While this is early in the time horizon for crypto-assets and testing in the Regulatory Sandbox – which is just over two years old – we have seen the following main use cases:
10. **International money remittance:** the potential for crypto-assets to act as a more efficient payments rail<sup>4</sup> was cited by respondents to the FCA's discussion paper on Distributed Ledger Technology (DLT), and has been successfully tested in the Regulatory Sandbox.<sup>5</sup> The test data demonstrated that a firm was able to use a crypto-asset as the intermediate currency to reduce the cost and processing time of money remittance, without compromising on security or compliance with our rules. Price volatility during the processing time was mitigated by locking in exchange rates with exchanges ahead of the transaction. This means the exchanges take on the price volatility risk.
11. The reduction in costs and processing time is partly attributable to the avoidance of expensive legacy technology prevalent in existing payment networks (up to 5% cheaper and under 15 minutes). Also, because transaction costs are agnostic of geography or existing banking infrastructure, there can be considerable benefits for consumers remitting funds to countries where payments have traditionally been difficult or prohibitively expensive. Therefore, as we concluded in our DLT discussion paper, we believe there is the potential for crypto-assets or tokens to enhance competition in the market for international remittances by reducing the cost and settlement time for transactions. However, these tests have been on a small scale, so whether those benefits hold true for large scale operations is still unknown.
12. **Issuance and settling of financial instruments:** the settlement process for existing financial instruments can often involve significant numbers of different counterparties, intermediaries and analogue processes. In the sandbox, a firm tested settling a short-term debt instrument using a crypto-asset network. This served to potentially streamline the traditional approach, by removing the need for registrars and nominees. The test was carried out in a way which demonstrated that it was possible to meet legal and regulatory requirements. The benefits we observed were

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<sup>4</sup> Payments rails refer to the technology or network used to transfer payments information or value between two parties.

<sup>5</sup> FCA, Distributed Ledger Technology Feedback Statement on Discussion Paper 17/03, December 2017

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that it was cheaper and more transparent for investors and issuers as information was stored on a public network.

13. **Listing of private companies' shares:** a sandbox firm tested the use of a crypto-asset 'smart contract'<sup>6</sup> to enable UK private limited companies to digitally represent their shares and corporate governance processes, resulting in improved efficiency and cost savings for issuing firms. Changes of share ownership affected on the firm's platform were directly updated in the Companies House register. Whilst the test was successful, the firm concluded that the proposition itself was not commercially viable so decided not to pursue it. One function of the sandbox is to give insights into commercial viability at an earlier stage than would otherwise be possible.
14. **Charitable donations and e-money:** a sandbox firm used a crypto-asset 'smart contract' to release donations to a UK charity when specific conditions were met – independently verified by a third party. The test found donors had greater transparency and control over the use of donation, and settlement times for transactions fell from hours to minutes. While only a small scale test, they estimated that should this model achieve scale then transaction fees could fall significantly provided the crypto-asset networks used and the firm could achieve scale.

## **Risks deriving from crypto-assets**

15. While we recognise crypto-assets have the potential to enhance the delivery of existing financial activities, through our work with firms and monitoring wider market developments we have identified several risks of harm, including:
16. **Price volatility:** partly because of the market dynamics, where trading volumes and market capitalisations are relatively low - in comparison to traditional financial services - we have observed that the crypto-asset market can be exceptionally volatile.<sup>7</sup>
17. This is compounded by the complex process for accurately pricing crypto-assets. Price discovery in a traditional marketplace is set by the information on the current consumption and expected future demand for a particular asset or commodity. Upper price ceilings are set by the maximum potential consumption and lower price floors limited by existing use. As most crypto-assets do not have any inherent worth in and of themselves – unless they are pegged to a scarce resource – and they are not actively used in commerce or secured by a central bank of a nation state, their price is reliant on market sentiment and speculative use cases rather than real world applications. This results in greater price instability – especially over a short time horizon.
18. Volatility can be miscommunicated and/or misunderstood by retail customers that purchase them. We note reported instances of consumers using credit cards, loans or overdrafts to purchase crypto-assets as an investment, hoping they will increase in value – effectively margin trading. When prices fall the purchaser may be left with

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<sup>6</sup> Smart contracts are defined in various ways. We understand them as DLT functionality that allows executing pre-determined commands without further human intervention.

<sup>7</sup> For more information about volatility of crypto-assets, see e.g. charts about price movements of Bitcoin, Bitcoin Cash, Ethereum and Litecoin on the website of Coinbase (one of the largest crypto-asset exchanges), available here: <https://www.coinbase.com/charts?locale=en>

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debts they cannot afford to repay. Purchasers are also reliant on unregulated exchanges, which struggle to manage their operational risks. These can expose individuals to counterparty risk if they use exchanges to custody assets.

19. Andrew Bailey, Chief Executive of the FCA has warned that people should be prepared to lose their funds if they invest in bitcoin.<sup>8</sup>
20. **Market manipulation:** because of the aforementioned dynamics of crypto-asset markets, where trading volume and capitalisation is considerably lower than established financial markets, there is a greater potential for malicious actors to coordinate price manipulation – such as “pump and dump” schemes. This presents a risk for any potential buyers – retail or institutional – who may interpret sudden price appreciation as a sign of a high quality crypto-asset with strong potential, only to lose their money as these price rises are reversed.
21. We are also concerned about the potential for other forms of market abuse. The relatively immature market infrastructure underpinning the crypto-asset market could lend itself to more complex forms of market manipulation such as insider trading or spoofing orders – the latter enabled by the lack of reporting standards and the overreliance on non-professional websites for price or market information.
22. However, there would be practical difficulties policing market abuse in many crypto-assets, even with the requisite powers, since much of the exchange trading is concentrated in non-EU jurisdictions, and identifying the underlying owners of crypto-assets, who may hold ‘inside information’ or those malicious actors spreading false information may be hampered by the virtual and, in part, anonymised nature of these assets.
23. **Crypto-asset derivatives:** financial products or instruments where crypto-assets are the underlying asset (such as a physically settled future or option), or where the price derives from crypto-assets (such as a ‘contract for difference’ or CFDs) fall within the perimeter. Firms conducting regulated activities in crypto-asset derivatives must, therefore, comply with all applicable rules in the FCA’s Handbook and any relevant provisions in directly applicable European Union regulations.
24. As noted in our FCA Statement on Crypto-asset derivatives,<sup>9</sup> we also view such products capable of being financial instruments under the Markets in Financial Instruments Directive II (MIFID II), although we do not consider crypto-assets to be currencies or commodities for regulatory purposes under MiFID II.
25. Recently, crypto-asset CFDs have been increasingly and more actively sold to the mass retail market, generating an increasing amount of revenue for CFD firms. This is despite them being complex, high-risk, volatile financial products.
26. While there are no general rules prohibiting the sale of products with significant price volatility, we have taken measures to ensure investors are aware of the high risk nature of any investment which is intrinsically linked to the market activity of crypto-

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<sup>8</sup> City AM, Andrew Bailey: Bitcoin investors should be prepared to lose all their money, December 2017

<sup>9</sup> <https://www.fca.org.uk/news/statements/cryptocurrency-derivatives>

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assets. These have included issuing a consumer alert on the risks involved with Initial Coin Offerings (ICOs) on September 14 (viewed 33,425 times),<sup>10</sup> a consumer warning on crypto-asset CFDs published on 14 November 2017 (viewed 10,419 times),<sup>11</sup> and supporting them with speeches and the media, such as on Newsnight in December 2017.<sup>12</sup>

27. The European Securities and Markets Authority (ESMA) has also recently announced its intention to use temporary product intervention powers to introduce restrictions on CFDs sold to retail clients, including crypto-asset CFDs.<sup>13</sup> Among other measures, this will restrict the amount of leverage firms can offer to retail clients on crypto-asset CFDs to a level of 2:1 (e.g. investors would need to post a minimum of 50% margin based on the notional value of their CFD exposure to a crypto-asset). Once these measures are applied, they will have direct effect in all EU member states. ESMA can renew its intervention on a 3-monthly basis provided the conditions remain to justify its measures. We issued a statement supporting ESMA's announcement and indicating that we expect to consult on whether the FCA should adopt the same measures on a permanent basis.<sup>14</sup>
28. As most crypto-assets are international by design, our preference is for an internationally coordinated response. We are working closely with European and other supranational regulators and global standard setting bodies such as the International Organisation of Securities Commissions (IOSCO). We will continue to monitor developments and work with other regulatory bodies to take action in line with our statutory powers where we see consumer harm.
29. **Money laundering:** another area where we believe potential harm may arise is where crypto-assets could be used to facilitate money laundering or increases the risk of terrorist finance. In 2017, the UK's National Risk Assessment of money laundering and terrorist financing risk (NRA), assessed the risk of crypto-asset use for money laundering to be relatively low. This was because of a lack of evidence of crystallised risk. However, FCA work on this issue using information that postdates the intelligence the NRA relied on shows evidence supporting wider-scale criminal use and we now view the potential harm in this space to be greater than previously assessed. However, we believe the greatest potential harm for money laundering in the UK remains in non-crypto-asset typologies.
30. When crypto-assets form part of regulated services, regulated firms can take steps to mitigate the money laundering risks. Such risks can be mitigated by effective implementation of financial crime systems and controls including customer due diligence at the on-boarding stage and ongoing monitoring of the relationship.

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<sup>10</sup> FCA, Consumer warning about the risks of Initial Coin Offerings, September 2017

<sup>11</sup> FCA, Consumer warning about the risks of investing in cryptocurrency CFDs, November 2017

<sup>12</sup> City AM, Andrew Bailey: Bitcoin investors should be prepared to lose all their money, December 2017

<sup>13</sup> Under Article 40 of the Markets in Financial Instruments Regulation ESMA can introduce temporary restrictions on certain products, see ESMA's press release:

[https://www.esma.europa.eu/sites/default/files/library/esma71-98-128\\_press\\_release\\_product\\_intervention.pdf](https://www.esma.europa.eu/sites/default/files/library/esma71-98-128_press_release_product_intervention.pdf)

<sup>14</sup> <https://www.fca.org.uk/news/statements/fca-statement-esma-temporary-product-intervention-retail-cfd-binary-options>

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31. Although crypto-assets themselves and the platforms which facilitate their exchange, are not within the regulatory perimeter, subject to the future implementation of the EU's 5AMLD in the UK, crypto-asset exchanges and custodian wallet providers will have to comply with AML requirements, including customer due diligence on all users and the requirement to identify checks and report suspicious transactions to law enforcement. This will be passed by the EU later on this year with Member States required to transpose the directive by late 2019/2020.<sup>15</sup>

### **The potential impact of Distributed Ledger Technology (DLT) on financial institutions, including the central bank, and financial infrastructure**

32. DLT was first used in the crypto-asset Bitcoin. Blocks of transactions – containing time, value, recipients and details of the previous block – are recorded using cryptography, and processed by a network of computers called 'miners'. Blockchain is the colloquial phrase used to describe this process, as the blocks of transactions are immutably linked together in sequential order on a shared digital ledger.
33. Alongside many other organisations, we have seen that the process of creating a shared ledger or registrar, distributed among several participants within a network could have a wide array of other purposes outside of crypto-assets. As we noted in our DLT feedback statement, we believe this is a highly variable and customisable technology that firms could use to underpin the issuance, trading and clearing of financial instruments to keep and share records and to facilitate regulatory reporting or enhance transaction monitoring.
34. **Regulatory reporting, 'Project Maison', case study:** as part of our RegTech initiative, we have worked with the R3 consortium and two major banks to develop a prototype application for regulatory reporting of mortgage transaction data using the Corda DLT platform. By hosting a 'regulator node' on the network, we were able to receive real-time mortgage transaction reports from participating banks in a test environment. The prototype records, executes and manages financial agreements, with DLT used to enable secure communication between participants.
35. **The potential impact of DLT on financial infrastructure:** as noted in our DLT feedback statement, we believe that DLT could bring several benefits to securities markets, notably more efficient post-trade processes and enhanced reporting and data management capabilities, as well as the possibility of reduced costs. It has the potential to reduce the number of intermediaries required to change legal ownership of securities and settle complex financial instruments.
36. But a number of challenges need to be addressed before substantial benefits can materialise. In particular, it is unclear whether DLT might be adopted broadly across securities markets or remains limited to niche uses.

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<sup>15</sup> Whether the UK is legally required to transpose the amendments will depend on the negotiated outcome over the terms of the Implementation Period

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## **The regulatory response to digital currencies from the Government, the FCA and the Bank of England in relation to Anti-Money Laundering legislation and how regulation could be balanced to provide adequate protection for consumers and businesses without stifling innovation**

37. This submission intends to clarify the FCA's perimeter regarding crypto-assets, while acknowledging that this is a complex and evolving picture.
38. We continually monitor and assess actual and potential harms, including where crypto-assets or any other technology could be used to undermine our regulatory framework. Where firms and individuals are in breach of our regulations, we will take appropriate action.
39. Regarding the FCA's strategic aim and operational objectives which are defined in FSMA, these are decided by Parliament and as such we have not commented on the existing balance between innovation and consumer protection.
40. Our Innovate initiative was designed to foster competition in the benefit of consumers. We have observed that innovation and consumer benefit are not diametrically opposed; in fact new innovations can provide substantial benefits for consumers: these benefits can materialise in many different ways, for example as cost reductions or improved product choice or more security, which is partly based on enhanced competition.
41. From our work with firms using crypto-assets, we have noticed it can be difficult for them to access basic financial services such as access to a business bank account, which can have a negative impact on competition. There might be multiple complex drivers behind such decisions to deny banking services to firms, for example, to comply with their AML obligations, banks may set requirements for firms that might be incompatible with using certain crypto-assets. However, we believe that deploying crypto-assets or DLT should not result in a wholesale denial of access to traditional banking services for firms.
42. Our Regulatory Sandbox is one area where we have seen firms delivering benefits in the interest of consumers. The sandbox creates a controlled environment in which firms can build and test appropriate consumer protections. In order to enter the sandbox, we require firms to have a number of safeguards in place:
- Sandbox firms have to undergo a full authorisation process – with requirements scaled to the size of the test – which grants a temporary permission to provide services to a limited number of consumers – often below 1000.
  - As a result they have to pass the existing threshold conditions and expectations of a fully regulated firm which reduces the potential for bad actors or individuals with malicious intent.
  - We also must be satisfied that firms meet our eligibility criteria which stipulate that it must be a genuine innovation which results in a demonstrable consumer benefit.
  - Sandbox firms have to outline a strict testing plan that identifies and mitigates any potential risks, especially where there is the potential for consumer detriment to arise.



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43. However, we also recognise that this sector poses unique risks and challenges that need to be mitigated.
44. We will continue to monitor the appropriateness of the existing regulatory framework for crypto-assets and DLT as a priority, informed by feedback from stakeholders and experience with innovative firms. We are also working on several internal projects, alongside engagement with the Bank of England and HM Treasury as part of the domestic Cryptoassets Taskforce.
45. We recognise that crypto-assets are international in nature and therefore we have been working closely with other international and supranational regulatory bodies, standard setters and monitoring agencies to share information to identify harm and take action where appropriate. This approach ensures that we are consistent with the international regulatory community and that consumers are adequately protected against harms that stretch across nation states.

April 2018