

Written evidence submitted by Whitechapel Think Tank and Ashurst LLP

Response to the DCMS Committee Call for Evidence: Non-fungible Tokens (NFTs) and the blockchain

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1. This response is the joint effort by the members and collaborators of Whitechapel Think Tank with the support of Ashurst LLP. The response aims to provide a broad perspective on the potential of non-fungible tokens ("NFTs") for the UK and global economies.
2. The Whitechapel Think Tank ("WTT") is a cross-sector forum for the financial and professional services industry to discuss and action opportunities and challenges presented by emerging technology adoption and implementation. The WTT's membership ranges from global financial institutions and seed-stage start-ups to investors, professional services firms, regulators and government departments. The WTT supports the overall goal for the UK to maintain its position as one of the leading and most innovative financial centres globally.
3. The WTT is supported in its response by Ashurst LLP, a leading international law firm whose global, multi-disciplinary team of experts provides innovative advice to local and global corporates, financial institutions and governments on all areas of commercial law. Ashurst has a leading, global digital finance practice whose members have worked and are working on some of the most innovative DLT-based applications in this nascent market to date for a broad range of clients, including technology companies and global banks and investment firms.

Summary of response

4. *Note on terminology: we believe it is more precise to refer to blockchain as a type of Distributed Ledger Technology ("DLT") and so use DLT in this response to cover the broadest possible usage of the technology.*
5. We consider that a light-touch regulatory approach is preferable while the NFT industry continues to evolve and that a "same product, same rules" approach should be a guiding principle. The regulatory framework should be technology agnostic and implemented carefully to ensure that different regimes for substantially similar products are not created. Ideally regulation would:
 - a) delineate between different types of NFTs;
 - b) apply solely where NFTs are linked to financial instruments/services;
 - c) be maintained and/or clarified in respect of the regulation of certain activities and intermediaries in the NFT distribution chain;

- d) recognise that NFTs are not always created for financial, investment or speculative purposes alone; and
 - e) not significantly diverge from other jurisdictions.
6. Potential harms to vulnerable people of NFT speculation include: (i) price fluctuation / volatility; (ii) founder disbandment / rugpulls; (iii) propagation of hate speech / symbols; and (iv) increased victimisation due to lack of understanding. Education is critical to ensuring that consumers have a clear understanding of what they are purchasing and the issues relating to NFTs.
 7. DLT as a technology does not in and of itself provide security to British investors (or any other person) but it is capable of enhancing security when used for particular purposes. However, aspects of that security may be insufficient unless certain operational issues are addressed and there is appropriate regulation and supervision of DLT and the digital assets (including NFTs) which are created and/or enabled by DLT.
 8. The greatest potential benefit to individuals and society of NFTs is the enablement of new business models for various industries, where liquidity was previously unattainable. We provide some examples of NFT-enabled use cases building new global markets and wealth creation which would benefit a wide range of industries.

Is the UK's light-touch NFT regulation sufficient?

Approach to regulation

9. We consider that a light-touch regulatory approach is preferable while the NFT industry continues to evolve. However, the current lack of formal regulation of NFTs creates regulatory uncertainty and therefore risk which is likely to act as a deterrent to greater use of NFTs and, in turn, may hinder innovation.
10. Our view is that a "same product, same rules" regulatory approach should be a guiding principle when formulating regulation of NFTs in order to avoid unnecessary complexity and confusion. Under this construct, the role of the regulator is to: (i) understand the characteristics of a new product and how it works; (ii) clarify the differences between the new product and existing products; and (iii) determine how these differences should be regulated (if at all). Regulatory principles, rules and requirements should be technology agnostic so that they apply to NFTs regardless of the specific underlying technology which is used.
11. The characteristics of NFTs will depend on the nature of the NFT – i.e. NFTs can represent unique characteristics but they can also represent characteristics of pre-existing products. For example, in the case of digital assets such as cryptocurrencies, stablecoins and digital twins, some products look and behave in the same way as a pre-existing counterpart (e.g. a tokenised security behaves as a security and a tokenised sterling pound behaves like a tangible sterling pound). In the case of NFTs, the NFT's pre-existing counterpart can be almost anything. Hence it is critical to determine what the NFT can and cannot represent in the digital world and where new regulation should be applied. Regulation should be implemented carefully to ensure that different regimes for substantially similar products are not created.

12. In addition, NFTs can gain new characteristics attributed by web3 primitives, such as programmability (the ability of a digital asset to have its behaviour programmed) and composability (the ability to build a new digital asset based on one or more pre-existing digital assets). The novelty of these features requires a new set of rules and guidelines in order to help the market navigate the use of NFTs.

Regulatory considerations

13. Ideally the property law treatment of NFTs will soon be confirmed in primary legislation. In this context, law reform recommendations relating to the property status of digital assets, including NFTs, may result from the Law Commission's Consultation Paper 256 on Digital Assets. Legal certainty and clarity regarding the nature and treatment of NFTs would dictate the rights attaching to NFTs and inform their regulatory classification (where relevant).
14. We consider that regulation of NFTs should take into account each of the following:
 - a) A clear delineation between different types of NFTs should be provided. We consider the delineation to be: (i) NFTs with real-world value (i.e. NFTs linked to physical assets or financial instruments); (ii) NFTs with digital value only; and (iii) NFTs with specific utility only (e.g. public records). It is important to recognise different characteristics of NFTs as the issues arising from each type, and the level of regulation that should apply to each, will vary.
 - b) Financial regulation should apply solely where NFTs are linked to financial instruments or financial services. Where NFTs are purely associated with e-commerce activities or a token to prove the provenance of an asset, for example, relevant private and consumer protection laws or other regulation should apply. There is an important distinction between NFTs which replicate a traditional regulated financial instrument (e.g. a bond, a share or a collective investment scheme) (together, "**Financial NFTs**") and NFTs which have no intrinsic financial component (e.g. digital artwork) ("**Non-Financial NFTs**"). In respect of Financial NFTs, we consider (in line with our "same product, same rules" suggested approach outlined above) that pre-existing regulation relating to traditional financial instruments should apply with amendments as necessary to accommodate unique aspects of NFTs (and other digital assets). In respect of Non-Financial NFTs, we think that new regulation should be limited to prevent the stifling of innovation and that there should be greater clarity on the application of existing private and consumer protection laws and that further guidance would be more helpful at present than a new financial regulatory regime for all NFTs. Private laws and consumer protection laws remain relevant and could be expanded upon to aid consumers.
 - c) Regulation of certain activities and intermediaries in the distribution chain should be maintained and/or, as appropriate, clarified. For example, cryptoasset exchanges should be subject to consumer laws, and more consumer education on such laws could be introduced, thereby ensuring greater protection for consumers with limited knowledge of the (often complex and evolving) legal issues surrounding digital assets.
 - d) The regulatory environment should recognise that NFTs are not always created for financial, investment or speculative purposes alone. Accordingly, the regulation of NFTs should not rest solely with regulators of financial entities (such as the Financial Conduct

Authority). The protection of consumer rights in connection with NFTs is crucial and should be a foundational principle of a regulatory framework for NFTs.

- e) In order to ensure the UK remains competitive from a global perspective, the UK's regulatory position on NFTs should not significantly diverge from other jurisdictions. In this context we note that the European Union is not currently proposing to directly regulate NFTs in its forthcoming Regulation on Markets in Crypto Assets (MiCA).

Other considerations

15. In terms of the UK's approach to NFTs more generally, we consider the following should be considered alongside regulation:

- a) It is imperative the UK decides what digital assets (including NFTs) it wants to regulate and how, and provides a clear definition or principles on this, before delving into sub-sectors of the digital assets sector, like NFTs. This is a hard question to answer, but it is foundational to everything else.
- b) International standards would be of significant value due to the global application and impacts of NFTs. For example, we would welcome the creation of international standards in respect of the storage and custody of NFTs in order to prevent fraud and in relation to NFT validation.
- c) The UK Government should take an interest in, and provide investment and incentives for, parties that validate and securely store NFTs for e-commerce purposes (i.e. parties providing NFT custody arrangements which are purely for secure storage purposes as opposed to crypto asset exchanges providing secure storage for trading purposes).
- d) Education is critical to ensuring that consumers have a clear understanding of what they are purchasing to prevent bad actors from taking advantage of them. For example, consumers are likely to assume the purchase or acquisition of NFTs equates to ownership of those NFTs which is not necessarily the case. Few consumers are aware that the terms of the smart contract establishes whether ownership is assigned to the purchaser or whether a licence is granted instead. A recovery fund could also be established to enable platforms to pursue bad actors.
- e) We support a review of pre-existing NFT insurance provision by the insurance industry (because, for example, custody and wallet insurance provision and terms are currently poor) and the development of insurance products tailored to different NFT use cases.
- f) Different types of infrastructure relating to NFTs should be supported (e.g. digital registries that bodies such as the Land Registry could benefit from implementing).

What are the potential harms to vulnerable people of NFT speculation?

NFT speculation

16. When speculation is considered in the context of NFTs, it is important to understand that collectibles have always had a secondary market – for example, the trading of baseball player cards in the US or the global trading of FIFA World Cup stickers, as well as the age-old tradition of collecting stamps or old coins. Such collectibles are subject to some scarcity and appreciation when traded on a secondary market. NFTs are distinguishable from these examples as they are likely to have higher liquidity and thus create the potential for higher value speculation (including in a secondary market) because they: (i) are provably scarce; (ii) have provable digital ownership; and (iii) are built within an infrastructure which resolves data integrity issues with native financial incentives.
17. In the context of NFT speculation, we consider potential harms to vulnerable people to include:
 - a) **Price fluctuation / volatility:** Digital assets like NFTs tend to be more liquid than their physical counterparts, as their digital nature makes them more easily exchangeable. We consider possible mitigants to include: (i) the monitoring by regulators of industry information and incorporating that data into on-chain data feeds that: (a) trigger automated consumer warnings; and/or (b) are absorbed by smart contracts to prevent inadvertent transactions with compromised assets from taking place; (ii) communicating with market participants on the occurrence of particular price events; and (iii) educating retail and enterprise audiences about the risks of trading with NFTs.
 - b) **Founder disbandment / rugpulls:** Founders leverage the pseudonymity of public DLTs like NFTs to launch projects (such as a new collection of NFTs) and subsequently retain all proceeds from the NFT collection sales without giving satisfaction to buyers. We consider potential mitigants to this harm to include the creation of regulatory controls to limit the degree of anonymity of founders on such projects and the education of retail and enterprise audiences.
 - c) **Propagation of hate speech / symbols:** Digital art projects (attached to NFTs) could allude to or explicitly reference hate symbols, thereby enabling the distribution of such digital art among retail investors. The traceability of NFTs makes it possible to track the issuer or distributor of offensive digital art and to subsequently apply existing laws to curb propagation. Educating retail investors to identify and prevent acquiring such pieces is important in this case.
 - d) **Increased victimisation due to lack of understanding:** Harm may arise where individuals misunderstand NFTs (for example, what rights, if any, attach to NFTs and how NFTs are best validated and stored) and we consider consumer education crucial in this case. For example, an uneducated consumer is likely to assume that the purchase or acquisition of NFTs equates to receiving ownership of the intellectual property rights subsisting in those NFTs which is not necessarily the case as NFTs are often licenced

rather than sold outright. An uneducated consumer is unlikely to first consider the terms of purchase (contained in the smart contract) to establish whether copyright ownership is assigned to the purchaser or whether a licence is granted instead. Where the NFT provides the link to a purchased asset, an uneducated consumer is unlikely to understand that this link is corruptible (or may cease to work in the future if it is not maintained) and consequently lose access to their purchase.

Other potential harms

18. The pseudonymity of NFTs generally makes it difficult for individuals to distinguish between good and bad actors operating in the NFT market, thereby making persons vulnerable to scams and other forms of exploitation.
19. Digital rewards (such as collectible NFTs) can be used to exploit children via social media, games and in-app advertising. The Online Safety Bill may help counteract this, but we consider that regulators (and not only regulators of financial bodies) are key to preventing harm and providing a mechanism for harms to be reported and addressed and enforcement action to be taken.

Do blockchains offer security to British investors?

20. We consider that DLT as a technology does not in and of itself provide security to any person. When used for a particular purpose, the technological security of activities connected to that purpose may be enhanced through the use of DLT. However, aspects of that security may be insufficient unless certain operational issues are addressed and there is appropriate regulation and supervision of DLT and the digital assets (including NFTs) which are created and/or enabled by DLT.
21. DLT can enhance the security of activities (including investment activities) in a number of ways, including due to the following attributes:
 - **Traceability:** DLT is designed to preserve the history log of transactions that happened at a specific point in time, enabling the auditability of historical data about those transactions.
 - **Immutability:** DLT logs cannot easily be altered.
 - **Censorship resistance:** DLT is designed to prevent a single actor from controlling the activities on the DLT-based system due to the distribution over a network of computers of the recorded data in the system and the use of cryptographic public and private keys.
22. However, the use of DLT as key transactional infrastructure has certain shortcomings which may impede its adoption and ability to offer security to investors. For example:
 - the level of knowledge required to effectively use DLT tools and solutions (including crypto wallets) can be high;
 - setting up and maintaining crypto wallets can be complicated, generally with poor user experience that is not fit for the average internet user; and
 - recovery of crypto wallets following the loss of passwords/private keys is difficult or impossible.

23. Investor education could help facilitate greater security and, in respect of Financial NFTs, consideration should be given to implementing retail investor suitability assessments similar to the customer suitability assessments which are required by traditional financial institutions in respect of more sophisticated financial instruments.
24. At an industry or market level, there is also the need for standards and obligations to be imposed on potential system gatekeepers (i.e. whoever is controlling the DLT system such as marketplaces, issuers and minters) in ways that enable control and compliance to be enforced. For example, the regulatory framework could require the entirety of software stacks of DLT systems to adhere to certain requirements, such as an obligation to include a regulatory node and/or to encode consumer protections into the DLT system.
25. In terms of technological security, while everything in technology can be hacked (including DLTs), it is important to distinguish between components of a DLT platform that are more prone to hacking (and the reasons for this) and components which are less susceptible to hacking:
 - a) **Wallets:** being the closest access point for users, wallets are highly dependent on the proficiency of users to be operated securely. The current lack of education in this area and the insufficiently intuitive user experience provided by this type of application makes it a preferred target for exploits. Some wallets (also known as “hot wallets” which are online 24/7) are usually a software in the user’s computer or a browser extension and in each case are potentially hackable. Seed phrases (12 or 24 random words that generate a wallet’s cryptographic private key) are virtually impossible to remember and, once lost or stolen, are gone forever, which makes it impossible to recover the corresponding digital assets.
 - b) **Bridges:** these are applications designed to help users transfer assets from one blockchain to another. Bridges involve up to 3 different technology standards (the sending blockchain, the receiving blockchain, and the bridge itself) and, because of this, they are subject to a larger number of bugs or design flaws that can be exploited by malicious actors.
 - c) **Smart contracts:** these are applications that run atop DLTs and interact with the underlying digital assets, defining their behaviour upon particular events. Smart contracts are computer programs that are complex and coded by human developers and, even if tested properly, can be subject to bugs or exploits.
 - d) **Consensus protocols:** these are the programmatic rules that govern how any DLT system operates and enforce the security mechanisms built into the system. Although some DLTs have been paused to perform upgrades (with consensus by node operators) or flooded with transactions (where network throughput is reduced and fees increase), there are no documented cases of DLTs having been hacked at the protocol level.

What are the potential benefits to individuals and society of NFT speculation?

26. Speculation is a by-product of NFTs being built atop public DLTs, where every aspect of the functionality is financialised. This is what makes NFTs more liquid than their physical world equivalents.
27. Besides resolving the double spend problem, where copying a digital object multiple times creates an inflationary pressure on the value of that object (for example, Napster), the greatest potential upside of NFTs is the enablement of new business models for various industries, where liquidity was previously unattainable. For example, by enabling provable digital ownership to individual digital objects, NFTs allow artists to directly reach and interact with their fanbase, reducing intermediaries (or eliminating them entirely) and allowing artists to directly fund their work. In addition, NFTs allow artists to directly aggregate a community around them, thereby increasing consumer access. NFTs can further be programmed for various functions (including the enablement of royalties payments), making it possible for a fan to sell their NFTs in a secondary market once they have exhausted their use of their NFT-related privileges (i.e. NFT creators can more easily benefit from royalties on resale in a secondary market).
28. There are many other use cases for NFTs (e.g. to represent identity, to evidence provenance and ownership and for registries) which benefit a broad range of industries. It is clear that governments and central banks globally appreciate the wide-ranging use cases for, and benefits of, NFTs (evidenced, for example, by the request last year for the Royal Mint to create an NFT by the Chancellor of the Exchequer, Rishi Sunak, and the issuance of a digital collector coin (LBCOIN) by the Bank of Lithuania in 2020).
29. We consider NFT-enabled use cases building new global markets and wealth creation to include the following:
 - a) NFTs make it easier to divide ownership. For example, the fractionalisation of ownership of various asset classes (including real estate, stocks, bonds, etc.). Consideration needs to be given here to whether the existing law on collective investment schemes in section 235 of the Financial Services and Markets Act 2000 should apply to these types of arrangements or whether a new exemption for certain types of collective ownership is necessary.
 - b) NFTs introduce and facilitate significant procedural efficiencies and reduce the reliance on traditional paperwork models, including in the case of the management and execution of collateral. For example: (i) the use of tokenised digital assets as collateral, coupled with smart contracts programmed to execute a variety of functions triggered by specific events (such as repayment, default, etc.) in the collateral lifecycle; and (ii) the creation of electronic documentation for commercial contracts and transactions (e.g. bills of lading, proof of delivery, proof of completion, etc.).
 - c) NFTs make possible more efficient creation of public registers (e.g. house deeds and other necessarily public documents and information).

- d) NFTs allow for the enablement of access to both digital and physical locations (known as token-gated access).
 - e) NFTs allow for the management of digital identity with the use of non-transferable NFTs (known as Soulbound Tokens).
 - f) NFTs make possible the establishment of a track record for financial suitability and academic and professional development with the use of on-chain credentials (for example, Proof of Attendance Protocols (POAPs)).
30. With the above benefits in mind, we are of the view that it would be beneficial for the UK Government to consider setting up an innovation fund and/or innovation initiatives within a range of industries in order to realise the full potential of DLT and NFTs.