CoinShares Response to FCA CP19/22: Prohibiting the sale to retail clients of investment products that reference crypto assets

CoinShares

PASSIVE TRACKERS	ACTIVE STRATEGIES	EXECUTION / FICC
XBT Provider issues publicly listed Exchange Traded Products.	A range of equity and venture capital focused funds.	Supports asset management and services clients, portfolio companies and institutions
The CoinShares Group is Europe's largest digital asset manager.		

All product related information in this response appears as a matter of record only and is not intended to be an offer or solicitation of an investment in any jurisdiction where it may be illegal to do so.

The text in this version of our response has been slightly amended prior to publication.

This Response has been issued by CoinShares (Holdings) Limited ('CSHL') on behalf of the CoinShares Group of Companies. CSHL is a private limited company incorporated in Jersey, Channel Islands (#123711). The registered office address of CSHL is 3rd Floor, 2 Hill Street, St. Helier, Jersey, JE2 4UA, Channel Islands.

A Note on CoinShares

The text in this version of our response has been slightly amended prior to publication.

XBT Provider, a member of the CoinShares family, is the issuer of exchange traded products ("ETPs") that aim to track an underlying cryptocurrency. XBT ETPs are structured as open-ended, undated, non-interest bearing certificates, which the FCA refers to as exchange traded notes ("ETNs")

The European ETN market has more than $30bn of AUM, with over 400 products providing exposure to a wide range of underlyings across commodities, equites, fixed income, currencies, volatility and (more recently) digital currencies. ETNs are listed on almost all of the major European exchanges.

ETNs are widely held by both retail and institutional investors and positively regarded for their ability to provide exposures that otherwise cannot be offered in a UCITS wrapper. Nevertheless, they are very well regulated. ETN issuers are required to offer securities pursuant to the Prospectus Directive and provide investor protection information such a Key Information Documents under MiFid. ETN disclosure provides a wide range of information to investors, including important information such as fees and risks. They are freely transferable and available for sale in the jurisdictions in which they have been admitted to trading or passported.

CoinShares' ETNs are listed on a number of EU regulated exchanges and are able to be purchased and sold like a listed share through a regulated broker. They have been passported under the Prospectus Directive.

Executive Summary

- *The proposed ban on crypto derivatives should exclude debt securities (ETNs) that provide 1:1 (i.e. delta 1) exposure to cryptoassets*

CoinShares believes it is inappropriate to include delta 1 ETNs in the FCA proposal to ban CFDs and derivatives due to their fundamentally different risk profiles and investment characteristics. Both the structural and payoff profile risks of these two product categories differ dramatically. ETNs are regulated products, listed on recognized exchanges, traded through regulated brokers and subject to the extensive disclosure and transparency requirements required by the Prospectus Directive and other regulations governing listed securities. Most derivatives, and in particular CFDs, on crypto currencies are not subject to the same level of regulatory scrutiny.

The differences are even more dramatic with respect to the risks associated with the payoff profile. CFDs and other derivatives involve (at times, significant) leverage and trading on margin, both of which can lead to outcomes that are not only unfavourable but also unexpected. Delta 1 ETNs, however, do not give rise to similar risks.

- *A ban on delta 1 ETNs will lead to poorer protection of UK investors and ultimately be contrary to the aims of the CATF Report with respect to crypto assets and DLT.*

We note the FCA's admission that the proposed ban "may encourage some retail consumers to 'invest' directly in unregulated tokens." We believe that the FCA is very much underestimating the reality that its unilateral ban on regulated investment in cryptocurrencies will drive retail investors to unregulated corners of the market while doing very little to dampen demand or increase investor protection. We believe the ban will do little to "mitigate the risks that crypto assets pose to consumers and market integrity" while at the same time, increasing risks of poor AML/KYC practice and threats to financial stability. We note that the FCA is currently the only such Western regulator proposing a wholesale ban of cryptoassets to retail clients and the only one making sweeping statements about their value.

The proposed ban is contrary to the FCA's objective of protecting investors and will, in particular, damage the UK's efforts to develop its standing among the cryptoasset community and its ability to lead in the space. The wider cryptoasset community will clearly interpret a ban as negative, which will in turn affect new investment.

- *CoinShares believes the FCA assertion that Bitcoin, and other cryptocurrencies, have ''no inherent value'' is inaccurate.*

Cryptocurrencies comprise, among other things, innovative technologies, nascent but rapidly growing networks and crypto assets that represent a store of value, a unit of account, and a medium of exchange. The FCA must consider the potential paradigm shift in both database management and assets when assessing the value of cryptocurrencies.

An investment in a currency such as Bitcoin is at its most basic an investment in the future adoption of the network by a wide variety of users. Cryptocurrencies such as Bitcoin also represent the first ever attempts to create digital commodities that have both scarcity and utility. Finally, we have seen several instances of Bitcoin price premiums forming in localised markets where there are enhanced levels of uncertainty around, or blatant mismanagement of, the national fiat currencies. Recent examples include Turkey, Venezuela and Argentina.

- *CoinShares disagrees with the FCA's conclusion that the price of Bitcoin, and other cryptocurrencies, is not driven by external factors such as usage or technological developments, but instead is driven by speculation, akin to gambling.*

We show that significant evidence exists supporting the argument that the price of Bitcoin, and other cryptocurrencies, is in fact driven by external factors such as usage and technological development.

- *CoinShares believes the FCA's cost-benefit analysis is flawed and ignores evidence that supports our request to exclude delta 1 ETNs from the proposed ban.*

We note that, as the FCA's own table shows, UK investors earned net aggregate profits of £117m from ETN investments against losses of only £38.3m. We urge the FCA to contrast this with CFDs and derivatives which had significantly higher losses as well as significantly higher fees. The FCA struggles to show net aggregate losses for ETN investors and can only do so by selectively adjusting data to fit its conclusions.

- *CoinShares believes the FCA needs to reconsider its claim that it ''is difficult to see how advisors could legitimately recommend a retail client to invest in delta 1 ETNs given the existing client's best interest and suitability rules.*"

Not all investors are the same, and advisors are legally obligated to take that into consideration when making suitability determinations. Whereas a delta 1 ETN referencing Bitcoin may not be suitable for an investor whose time horizon and risk preferences cannot tolerate the heightened volatility, we do not believe this limited example can define the entirety of the possible investor class. CoinShares' research shows that there is a place for a small asset allocation to cryptocurrencies in an investor's diversified portfolio, as long as that investor has the capability to buy and hold on a multi-year basis.

Finally, we believe that the investors are also different. We note that none of the retail investors in the report: *''How and Why Consumers Buy Cryptoassets: A Report for the FCA''* invested via delta 1 ETNs; as a result, we do not believe they are representative of delta 1 ETN investors. We encourage the FCA to engage with ETN investors separately to consider the impact of a ban.

- *CoinShares delta 1 ETNs involve lower maximum drawdowns and less risk and volatility than other existing ETNs in Europe that are not subject to a ban.*

There are hundreds of ETNs in the European market, many of which involve leverage (up to 5x) on complex and volatile assets such as oil and natural gas. We provide a comparative list of a small sample available to UK retail investors in our response to the FCA's question 2 below. We believe that ETNs referencing crypto-assets should be considered within the context of the ETN industry and not as a corollary to highly leveraged and far riskier derivatives and CFDs.

Q1: Do you agree with our analysis of the key risks and harm posed by these products? Is there any additional evidence or factors that we should consider?

We do not agree with the analysis of the key risks and harm. We urge the FCA to consider the following:

- Risks inherent to ETNs and CFDs (or other derivatives) are fundamentally different and the FCA should assess those risks separately;
- The FCA is seriously underestimating the unintended consequences of a ban on investment into regulated delta 1 ETNs referencing crypto assets. A ban on investment in all regulated settings will not reduce investor demand or access, will therefore inevitably lead to poorer protection of UK investors, and ultimately will be contrary to the CATF report;
- The FCA's analysis of valuation and price formation of crypto assets is flawed and needs additional consideration; and
- Delta 1 ETNs on cryptocurrencies involve no more risk and volatility than many other ETNs (many of which provide up to 5x leverage) in Europe, which would not be subject to a ban.

1. *Risks Inherent to delta 1 ETNs fundamentally differ from CFDs (and other derivatives) and delta 1 ETNs on crypto currencies involve no more risk than other ETNs that would not be subject to such a ban*

We discuss this point in detail in our response to Question 2.

2. *The FCA is seriously underestimating the unintended consequences of their proposal*

We agree with the comments made by the FCA and Treasury select committee that the UK has a unique opportunity to be global leaders in the crypto asset industry. We commend the work being done to (i) set higher KYC/AML standards for cryptoasset exchanges, (ii) establish clear classification guidelines for different types of cryptoassets and (iii) create a healthy regulated environment to enable sustainable innovation in the crypto industry.

However, we believe the proposed ban on allowing any regulated form of retail investment into cryptocurrencies represents a significant step backwards. Specifically, setting a standard for discouraging regulated, responsible sales and marketing activities of delta 1 ETNs will do little to protect investors or to make it difficult for them to access cryptocurrencies.

We note that unlike many other retail products the FCA has banned in the past (for example, unlike many of the underlyings for non-mainstream pooled investments) cryptoassets are readily accessible to retail via a number of routes. Retail investors can easily trade on unregulated foreign exchanges or indeed, simply sign up to UK fintechs.

The proposed ban will, at best, drive all retail investment to unregulated venues, and, at worst, force UK individuals into interacting with questionable payment processors and cryptocurrency service providers in jurisdictions with lower regulatory standards than the UK (or no regulatory standards at all).

In practice, this effectively means retail access to crypto currencies with no CF30 approved personnel accountable for their conduct of business[6], no regulated disclosure documentation about crypto currencies or their risks, and no access to financial services compensation schemes (FSCS). It means customers trading on unregulated exchanges, with minimal KYC/AML requirements, with no established custody of client monies rules and with increased exposure to cyber-security risks.

It is not acceptable for the FCA to ban delta 1 ETNs just because they are in its regulatory perimeter, despite the clear fact that it will do little to protect investors. Indeed, the proposed ban will hinder the FCA's ability to engage with and learn from regulated providers of cryptoassets, and in turn, to positively guide and control developments in the retail space.

Furthermore, and perhaps most importantly, the ban will be unique among Western regulators. CoinShares has developed strong relationships with regulators in jurisdictions such as the USA, Sweden and Switzerland, and the FCA is the only major Western regulator to declare that cryptoassets lack "inherent value" and to propose a retail ban. Most regulators refuse to engage in the process of "picking winners," a principle to which the FCA has also subscribed. In the US, the next most restrictive jurisdiction, the SEC has routinely stated that it is not passing any judgement on crypto assets as an investment proposition. In addition, despite its current refusal to register an ETF referencing Bitcoin, the SEC has not sought to block other products available to "accredited investors," to prevent

[6] Soon to be Certificated Staff under the Senior Managers & Certification Regime

registered investment advisors (similar to UK IFAs) from purchasing those products or to prohibit retail from investing them in the OTC market. The proposed ban on delta 1 ETNs very much risks the UK's prime position as a hospitable jurisdiction for cryptoasset businesses. The wider crypto industry will clearly see the proposed ban as strongly negative for new investment in the UK.

3. *The FCA's claim that crypto assets have no inherent value is fundamentally wrong, and its analysis of valuation and price formation of cryptoassets is flawed and needs additional consideration*

The FCA makes an unprecedented claim that crypto assets have "no inherent value." No other Western regulator, as far as we are aware, has gone to such lengths to dismiss their potential investability with such a blanket and unsupported assertion.

Cryptocurrencies comprise, among other things, innovative technologies, nascent but rapidly growing networks and cryptoassets that represent a store of value, a unit of account, and a medium of exchange. The FCA must consider the potential paradigm shift in technology and finance when assessing the value of cryptocurrencies.

There is significant and growing evidence that the value of networks, especially those involving the use of user-to-user communication grows proportionally to the square of the number of users[7]. This is referred to as the Network Effect. Cryptoassets such as Bitcoin offer investors access to the value creation inherent in the Network Effect. More simply put, an investment in a currency such as Bitcoin is at its most basic an investment in the future adoption of the network by a wide variety of users. Indeed, in the late 1980s, the emergence of new companies with new internet technologies, such as Netscape, called for new valuation metrics. Old metrics would have made investment unattractive. Network value is a new metric for the investment in the growth and development of crypto networks.

Cryptoassets such as Bitcoin also represent the first ever attempts to create digital commodities that have both scarcity and utility. As a result, Bitcoin is often compared to digital gold. Indeed, like gold, we are beginning to see investors buy Bitcoin to hedge against political and economic risks.[8,9,10]

Finally, we have seen several instances of Bitcoin price premiums forming in localised markets where there are enhanced levels of uncertainty around, or blatant mismanagement of, the respective national fiat currencies. Recent examples include Turkey,[11] Hong Kong,[12] Venezuela[13] and Argentina.[14]

In paragraph 3.9, the FCA claims that "We have found that firms manufacturing, and consumers seeking to invest in, crypto derivatives are unable to reliably value the underlying cryptoassets." and that "This makes it impossible to reliably value the derivatives contracts or ETNs linked to them."

In a similar manner to traditional assets, there are several methods to value Bitcoin (and other crypto assets). We strongly disagree with the FCA's statement and note that there are a multitude of research outputs offering investors views on crypto asset valuation, including bulge bracket investment institutions such as Goldman

[7] **Peterson, Timothy.** Metcalfe's Law as a Model for Bitcoin's Value. *Alternative Investment Analyst Review,.* 2018, Vol. 7, 2

[8] **Cuthbertson, Anthony.** The Independent. [Online] August 26, 2019. https://www.independent.co.uk/life-style/gadgets-and-tech/news/bitcoin-price-latest-trump-us-china-trade-war-tariffs-a9078861.html

[9] **Beck, Matthew.** Grayscale Research. [Online] June 2019. https://grayscale.co/wp-content/uploads/2019/06/Grayscale-Hedging-Global-Liquidity-Risk-with-Bitcoin-June-2019.pdf

[10] **PlanB.** [Online] March 22, 2019. https://medium.com/@100trillionUSD/modeling-bitcoins-value-with-scarcity-91fa0fc03e25

[11] **Trustnodes**. [Online] August 10, https://www.trustnodes.com/2018/08/10/bitcoin-500-premium-turkey-eth-50-premium-turkish-lira-plunges

[12] **Kharif, Olga.** LiveMint. [Online] August 14, 2019. https://www.livemint.com/market/stock-market-news/bitcoin-trades-at-a-premium-in-some-countries-1565752696234.html

[13] **Young, Joseph.** CCN Markets. [Online] February 11, 2019. https://www.ccn.com/bitcoin-trading-in-venezuela-just-hit-an-all-time-high-despite-a-40-price-premium/

[14] **Emsley, Jonnie.** Cryptoslate. {Online] September 9, 2019. https://cryptoslate.com/bitcoin-premium-argentina-macri-capital-controls/

Sachs,[15] JPMorgan Chase,[16] and Credit Suisse[17] and professional newsletters such as Fundstrat,[18] Bitassist,[19] Crypto Weekly,[20] and Delphi Digital.[21]

Before moving further, we want to make a distinction between two different sets of price analysis tools, both of which are in widespread use in the context of crypto assets. A *valuation model* is a valuation tool which can arrive at an overall valuation of an asset *without knowing anything about the current or historical pricing of the asset.* A *price indicator* on the other hand, is a valuation tool that can give an investor information about *the current state of asset prices compared to some benchmark*, often involving a past or current state of the price itself.

There have been multiple academic proposals for crypto asset valuation models. Without going into detail on the structure and merits of each one we mention, Pagnotta & Burashci 2018,[22] Li & Wang 2016,[23] and Wheatley et. al.[24] from Imperial College London, City University of Hong Kong, and ETH Zurich, respectively. These models all use fundamentals external to the existing price of Bitcoin and can therefore be used to model value based on forward expectations.

As other non-academic examples, the anonymous analyst PlanB models the value of monetary assets using scarcity via a stock-to-flow approach. Their approach gives highly accurate results when applied not only to Bitcoin, but also scarce commodities with monetary properties such as gold and silver[25]. Johnny Antos and Reuben McCreanor employ an Efficient-Markets Valuation Framework for Cryptoassets using Black-Scholes Option Theory[26] and John Pfeffer uses a mixed methodology including the Equation of Exchange to value crypto assets.[27]

Apart from these valuation models, there exists a host of price indicators using various fundamental metrics in some relation to asset prices to give investors insights regarding current asset prices as compared to a variety of correlated benchmarks. Among many we mention Realised Capitalisation,[28] Delta Capitalisation,[29] Thermo-Capitalisation,[30] Network Value to Transactions (NVT) Ratio,[31] NVT Signal (Kalitchkin's NVT),[32] Mayer Multiple,[33] Difficulty Ribbon[34] and Bitcoin Network Momentum.[35]

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[15] **Jafari, Sheba.** [Online] August 2019. https://www.scribd.com/document/421604963/Goldman-Sachs-slide-deck

[16] **Ossinger, Joanna.** Bloomberg. [Online] May 2019. https://www.bloomberg.com/news/articles/2019-05-20/jpmorgan-says-bitcoin-s-jump-mirrors-2017-s-boom-bust-pattern

[17] **Jacobs, Sam.** Business Insider. [Online] January 2018. https://www.businessinsider.com/credit-suisse-bitcoins-fair-value-is-almost-half-current-price-2018-1?r=US&IR=T

[18] **Fundstrat**. [Online] https://www.fundstrat.com/

[19] **Bitassist.** [Online] https://www.bitassist.co.uk/

[20] **Crypto Weekly.** [Online] https://cryptoweekly.co/

[21] **Digital, Delphi.** [Online] https://www.delphidigital.io/

[22] **Pagnotta, Emiliano and Buraschi, Andrea.** *An Equilibrium Valuation of Bitcoin and Decentralized Network Assets.* [SSRN] s.l. : SSRN, 2018

[23] **Xin, Li and Chong, Alex Wang.** *The technology and economic determinants of cryptocurrency exchange rates: The case of Bitcoin.* [ScienceDirect] 2016

[24] **Wheatley, Spencer, et al.** *Are Bitcoin Bubbles Predictable? Combining a Generalized Metcalfe's Law and the LPPLS Model.* [arXiv] March 2018

[25] **PlanB.** [Online] March 22, 2019. https://medium.com/@100trillionUSD/modeling-bitcoins-value-with-scarcity-91fa0fc03e25

[26] **Antos, Johnny and McCreanor, Reuben.** [Online] March 2018. https://medium.com/blockchain-advisory-group/an-efficient-markets-valuation-framework-for-cryptoassets-using-black-scholes-option-theory-a6a8a480e18a

[27] **Pfeffer, John.** [Online] December 2017. https://s3.eu-west-2.amazonaws.com/john-pfeffer/An+Investor's+Take+on+Cryptoassets+v6.pdf

[28] **CoinMetrics.** [Online] December 2018. https://coinmetrics.io/realized-capitalization/

[29] **Puell, David.** [Online] Adaptive Capital, February 2019. https://medium.com/adaptivecapital/bitcoin-delta-capitalization-1d51a7b256b4

[30] **Carter, Nic.** [Online] September 2018. https://www.docdroid.net/FbgH1WS/bitcoin-institution-riga.pdf#page=8

[31] **Woo, Willy.** [Online] October 2017. https://woobull.com/introducing-nvt-ratio-bitcoins-pe-ratio-use-it-to-detect-bubbles/

[32] —. [Online] February 2018. https://woobull.com/nvt-signal-a-new-trading-indicator-to-pick-tops-and-bottoms/

[33] —. [Online] http://charts.woobull.com/bitcoin-mayer-multiple/

[34] —. [Online] August 2019. https://woobull.com/introducing-the-difficulty-ribbon-the-best-times-to-buy-bitcoin/

[35] **Swift, Philip.** [Online] October 2018. https://blog.goodaudience.com/bitcoin-network-momentum-a42346b2f0ce

- *We therefore argue that the FCA is incorrect in its assessment that no reliable methodologies for valuing crypto assets exist. As with any other valuation based on projections of future variable states, the outcome is only as strong as the input assumptions, and poor inputs do not invalidate a valuation methodology if it subsequently – and predictably – outputs poor results. There exists a large number of valuation methodologies, price indicators and professional publications offering investors insights into crypto asset valuations. These are all readily available to the public via simple internet searches.*
- *We also note that during the production of the report, to our knowledge, the FCA did not consult with any industry participants as part of their information-gathering process regarding crypto asset valuation. It seems clear that the FCA needs to take more time to familiarise itself with the current body of academic and industry research before banning delta 1 ETNs*

In paragraph 3.11, the FCA argues that crypto assets "would arguably have 'value' if they could be widely exchanged for other assets or goods". While we would argue that this metric does not in itself determine whether or not an asset is valuable, we can nevertheless trivially demonstrate that all relevant crypto assets can indeed be widely exchanged for other assets or goods and would therefore, by the FCA's own logic and admission, have value.

There are two major ways to exchange cryptoassets for assets, goods or services — directly with merchants and indirectly through FX conversions. Holders of cryptoassets can therefore either send cryptoassets directly to their counterparty in return for assets, goods or services, or they can pay their counterparty in another currency, crypto or fiat, via an FX conversion.

As such we first point to the most self-evident proof that cryptoassets can be widely exchanged for other assets: cryptoassets, especially the major ones, can be readily and easily exchanged for all major fiat currencies. There are dozens of mid- to large-scale cryptoasset exchanges available globally, and daily Bitcoin spot volumes alone regularly exceed $1bn.[36]

Apart from the fact that crypto assets can be readily converted into every major national currency, we also note the following: Bitcoin can be used to buy Amazon, Starbucks, BestBuy, Whole Foods, Apple, Nike, Target, Macy's, ebay, Walmart, Target and Uber gift cards at gyft;[37]Groceries at Bitplaza;[38] Electronics at Purse;[39] Over a million household items at Overstock;[40] Flights at Cheapair;[41] Hotels at Destinia;[42] Software at Microsoft;[43] And Gold and Silver at SchiffGold.[44]

Litecoin can be used to pay at more than 39,000 merchants in the United States through the Flexa point-of-sale system.[45]

- *We therefore argue that the FCA is incorrect in its assessment that crypto assets are not widely exchangeable for assets and goods. Contrary to the FCA's opinion, we demonstrate that cryptoassets can readily be traded for assets and goods either via direct transactions or via FX conversions.*
- *There are dozens of cryptoasset exchanges available globally and total spot volumes regularly exceed those of many liquid blue-chip equities. In addition to the FX conversion route there are scores of shops and online marketplaces where crypto asset holders can pay for assets or goods (or services) using direct cryptoasset transactions.*
- *By the FCA's own logic and admission then, our evidence would demonstrate that cryptoassets do in fact have value.*

In paragraph 3.12, the FCA argues that because two (seemingly random) analysts using the same valuation model got two widely differing results when attempting to value Bitcoin, its value is difficult to calculate.

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[36] **Bendiksen, Christopher.** [Online] July 2019. https://coinshares.co.uk/research/2019-h1-crypto-report

[37] **Gyft.** [Online] July 2019. https://www.gyft.com/

[38] **Bitplaza.** [Online] July 2019. https://www.bitplazashopping.com/

[39] **Purse.** [Online] July 2019. https://purse.io/

[40] **Overstock.** [Online] July 2019. https://www.overstock.com/

[41] **CheapAir.** [Online] July 2019. https://www.cheapair.com/

[42] **Destinia.** [Online] July 2019. https://destinia.co.uk/

[43] **Microsoft.** [Online] July 2019. https://www.microsoft.com/

[44] **SchiffGold.** [Online] 2019 July. https://schiffgold.com/

[45] **Richards, Franklyn.** [Online] March 2019. https://litecoin.com/en/news/flexa-adds-litecoin-to-its-39000-merchant-network

There are multiple problems with this argument. First, a sample size of two is not considered sufficient by any statistical standard. Second, the FCA uses a valuation model — the equation of exchange — which is not widely accepted within the industry to be appropriate for crypto assets. And finally, we note that a model output difference of 400x is hardly surprising when the inputs differ by 1250x, thus the logic of the criticism is flawed.

It is also important to note that there is a big difference between *current* and *future* valuations of any assets. This is especially true of assets whose usefulness rely on network effects. For example, when the telephone was first invented, and there were only two existing telephones, the then-current value of the telephone network was negligible, but the *estimated future value* for the network (based on reasonable growth assumptions) would have been meaningful.

More attempts at valuing Bitcoin have been made than would practically fit in this response. But to illustrate both the range of attempts, assumptions and the varying accuracy of the results, we have collected a number of valuations below. While we do not necessarily agree with, or endorse the below valuation methodologies, the collection does illustrate the breadth and availability of methodologies, and also demonstrate that it is certainly *possible* to accurately value crypto assets.

1. Goldman Sachs analyst Sheba Jafari uses Elliott Wave Theory to estimate the *short-term future value* of Bitcoin at $13,971;[46]
2. JPMorgan Chase uses cost of production to estimate the *current value* (20 May 2019) of Bitcoin at just below $5,000;[47]
3. Daniel Sangyoon Kim uses the Equation of Exchange and assumptions about future use to estimate a *long-term future value* of Bitcoin of $45,000;[48]
4. CoinShares Chairman Danny Masters (December 2015) uses a linear replacement value model to estimate a *future value of Bitcoin at $4,400 in December of 2015;*[49]
5. Phil Bonello uses mixed methodologies to value productive crypto assets;[50]
6. William Mougayar uses mixed methodologies to value productive crypto assets;[51]
7. Vitalik Buterin uses a reworked Equation of Exchange to value 'Medium-of-Exchange Tokens;[52]
8. Multicoin Capital uses mixed methodologies to value productive crypto assets;[53]
9. Timothy Peterson uses Metcalfe's Law to estimate *past, current and future values* of Bitcoin in a continuous time series;[54]
10. PlanB uses Stock-to-Flow modelling to estimate *past, current and future values* of Bitcoin in a continuous time series;[55]
11. John Pfeffer uses a mixed methodology including the Equation of Exchange to estimate a *future value* of Bitcoin between $260,000 and $800,000;[56]

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[46] **Jafari, Sheba.** [Online] August 2019. https://www.scribd.com/document/421604963/Goldman-Sachs-slide-deck

[47] **Ossinger, Joanna.** *Bloomberg.* [Online] May 2019. https://www.bloomberg.com/news/articles/2019-05-20/jpmorgan-says-bitcoin-s-jump-mirrors-2017-s-boom-bust-pattern

[48] **Kim, Daniel Sangyoon.** [Online] June 2019. https://hackernoon.com/fundamentally-valuing-bitcoin-at-45-000-btc-a7f171521ae6

[49] **Masters, Daniel.** [Online] December 2015 https://www.dropbox.com/s/5brcacxmecnp7e3/GABI%20Newsletter%202015_12.pdf?dl=0

[50] **Bonello, Phil.** [Online] June 2018. https://hackernoon.com/valuing-productive-cryptoassets-89cedad444e6

[51] **Mougayar, William.** [Online] June 2017. https://medium.com/@wmougayar/tokenomics-a-business-guide-to-token-usage-utility-and-value-b19242053416

[52] **Buterin, Vitalik.** [Online] October 2017. https://vitalik.ca/general/2017/10/17/moe.html

[53] **Samani, Kyle.** [Online] February 2018. https://multicoin.capital/2018/02/13/new-models-utility-tokens/

[54] **Peterson, Timothy.** Metcalfe's Law as a Model for Bitcoin's Value. *Alternative Investment Analyst Review,.* 2018, Vol. 7, 2

[55] **PlanB.** [Online] March 22, 2019. https://medium.com/@100trillionUSD/modeling-bitcoins-value-with-scarcity-91fa0fc03e25

[56] **Pfeffer, John.** [Online] December 2017. https://s3.eu-west-2.amazonaws.com/john-pfeffer/An+Investor's+Take+on+Cryptoassets+v6.pdf

12. Ken Alabs uses Metcalfe's law to estimate *past, current and future values* of Bitcoin in a continuous time series;[57]
13. Credit Suisse analyst Damien Boey uses the size of the Bitcoin network and the spread on BBB rated bonds to estimate the *current value* (17 January 2018) of Bitcoin at $6,000.[58]

- *We therefore again argue that the FCA's argument that crypto assets are impossible to value is incorrect, and is in this instance based on insufficient sample sizes, inappropriate analytical techniques, and misinterpretation of mathematical relationships.*
- *In our list of attempted valuations there is also a wide range of estimated values. This is a natural consequence of using different assumptions and this effect is found in all other asset valuation methodologies. This clearly supports our argument that crypto asset valuations are no more or less uncertain than other asset valuations — they all rely on unknowable assumptions about the future and are therefore all based on artful guesswork.*

In paragraph 3.14, the FCA argues that because the prices of selected crypto assets correlate somewhat over the course of their chosen time range, none of their prices are determined by external factors, but are all based on speculation akin to gambling.

Here again there are multiple problems with the FCA's argumentation.

Under commonly accepted economic doctrine,[59,60] speculation is recognised as a fundamental and essential function of properly operating markets. Without speculation the very acts of investment and entrepreneurship would be impossible. Speculating on the future value of assets is not a structured game like gambling in any other sense than limited superficial similarity, but is a real-world economic action initiated by market participants looking for returns on investment. To be clear: investment *is* speculation on future prices as they relate to current prices.

Showing that certain markets are correlated, especially markets within the same general industry, does not in any way demonstrate that markets are not driven by external factors. On the contrary, it is a sign of shared external underlying price influences.[61] In fact, since many of the assets shown in the curve use similar — though not equivalent— technologies, it is highly appropriate that their prices be correlated.

As an example, if the shares of airlines, airports, flight services and airplane manufacturers correlate, it is not a sign that the price of these shares are somehow not driven by external factors and therefore pure gambling. Rather, it is a sign that the four different businesses *share a common external price determinant — the market for air travel.* Likewise, crypto assets share much of the same underlying technology and as such, it is only natural that the overall growth in crypto asset usage results in positive price sentiment across the entire industry.

To illustrate our argument further, we may draw a good analogy to the dotcom bubble. Even though almost all dotcom assets were highly correlated during the runup of the bubble (as their future prospects were all, correctly or not, associated with the advent and disruptive growth possibilities of the internet industry), only the substantive assets such as Amazon survived the bubble 'pop'. Even if assets within the same sector are erroneously correlated for limited lengths of time, that doesn't mean that they i) are all driven by internal price factors and speculation, nor ii) will continue to correlate in perpetuity.

We also note that as of 30 September 2019 the three-year correlation of daily returns between Bitcoin and Ether, Litecoin and XRP is 60%, 61%, and 27%, respectively. This is significantly lower than those of the S&P 500 and Nasdaq indexes, whose 3-year correlation of daily returns is 95% over the same time span, and whose constituent companies span a much wider band of industries than crypto assets.

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[57] **Alabs, Ken.** [Online] June 2017. https://medium.com/@alabs.ken/a-macro-mathematical-model-for-the-observed-value-of-digital-blockchain-networks-23cc8e0dc7ea

[58] **Jacobs, Sam.** Business Insider. [Online] January 2018. https://www.businessinsider.com/credit-suisse-bitcoins-fair-value-is-almost-half-current-price-2018-1?r=US&IR=T

[59] **Heckinge, Richard and Mengle, David.** *Understanding Derivatives* [Online] August 2013. http://chicagofed.org/digital_assets/publications/understanding_derivatives/understanding_derivatives_chapter_1_derivatives_overview.pdf

[60] **Johnson, Leland L.** *The Theory of Hedging and Speculation in Commodity Futures.* London : Palgrave McMillan, 1976

[61] **Lee, Kiseok and Ni, Shawn.** On the dynamic effects of oil price shocks: a study using industry level data. *Journal of Monetary Economics.* 2002, Vol. 49, 4

- *We therefore argue that the FCA is incorrect in its assessment that cryptocurrency prices are purely driven by speculation akin to gambling and instead point out that it is both appropriate and common for asset prices in the same industry to show some degree of correlation.*

In paragraph 3.17, the FCA claims that "crypto asset valuations may not reliably take account of the potential risk of a hard fork event." We find it difficult to reconcile the contradictory positions of the FCA regarding the impact of external factors on crypto asset price formation with the fact that hard forks have not only driven price but also delivered value to investors.

The sole time a significant hard fork event actually affected Bitcoin — the underlying asset of the COINXBT and COINXBE ETN products — it triggered a special dividend for note holders,[62] significantly increasing their returns. Indeed, each holder of our delta 1 ETNs referencing BTC at the time of the hard fork received an 11% "dividend" from value created by the hard fork. In this instance, the total value of the two forked assets was accretive as the market perceived the split as a positive technical development. Indeed, hard forks can be seen akin to corporate actions such as dividends or spin-offs, with the fork evidencing the realised value of increased network adoption.

This yet again demonstrates that external factors both can and do influence the price formation of crypto assets, and that the effect can be either negative *or positive* or indeed entirely inconsequential, based on the technical nature of the hard fork event.

We would also like to draw a parallel between the price movement in crypto assets ahead of and after known upcoming forking events, and the movement in prices of stocks ahead of and after dividend payouts. As a known dividend date approaches, stocks are commonly bid up to reflect the anticipated pay-out for shareholders. Immediately after the pay-out, prices commonly drop to reflect the reduced value of anticipated future pay-outs.

In some respects, the behaviour of crypto asset prices ahead of and after forking events can be seen as similar. This is particularly true if the fork is seen as beneficial by investors and therefore expected to be accretive to the sum of the values of the two forked assets after the event. Investors expecting the sum of the two forked assets to be more valuable than the unforked asset will bid up the price before the fork and then sell the two forked assets after the event to lock in a profit, causing prices to drop[63].

Furthermore, in the same paragraph, the FCA claims that hard fork events have led to significant price volatility, but again offers no data or proof supporting this statement, making review on our part impossible. In this particular instance, they mention the Bitcoin Cash hard fork event as a cause of volatility in crypto markets, but a single instance of a fork happening at the same time as a volatility event does not constitute proof of causation.

There were more than 35 hard fork events off of Bitcoin alone in 2017 and 2018[64], and for their argument to hold the FCA would have to show a reliable correlation between these forks and volatility events. Randomly picking one such event that happened to coincide with a volatility event does not constitute evidence of any connection between the two, and until such evidence is provided, this argument must be dismissed as unsubstantiated.

While one can indeed make the argument that forks may be difficult to understand, this is equally the case for equities pre- and post-dividend, as well as for all assets dealing with complex technology such as electronics, aerospace engineering, biotechnology, nanotechnology, material science etc., all of which the FCA deem perfectly appropriate to trade, even by retail investors.

- *We therefore again disagree with — and note the persistent contradictions in — the FCA's argument that crypto asset price formation is not subject to external factors such as technical developments, in this case hard forks. On the contrary, we show that to the extent that hard forks have an effect on price formation, this effect can be both negative or positive, depending on the technical nature of the hard fork.*
- *Furthermore, while the technical nature of these events may be difficult to understand for lay people, this is not materially different for any other assets based on complex technology or indeed for regular equity pricing in the periods immediately before and after anticipated dividend payouts.*
- *We somewhat agree that forking of open source software represents an area of crypto asset price dynamics that is as of yet not fully understood. However, using lack of understanding of emergent concepts in nascent technologies is hardly an*

[62] **XBT Provider.** [Online] November 2017. https://xbtprovider.com/news/xbt-provider-ab-further-update-in-connection-with-bitcoin-cash.

[63] **Chen, James.** Investopedia. [Online] March 2019. https://www.investopedia.com/terms/e/ex-dividend.asp

[64] **Bitcoin Forks.** [Online] July 2019. https://www.forks.net/list/Bitcoin//1/2017-01-01/2020-01-01

appropriate pretext for wide-reaching legal restrictions on innovative new financial instruments. The UK should be leaning into and leading financial innovation, not restricting it through hostile regulatory environments.

In paragraph 3.30, the FCA claims that the price spread of Bitcoin across exchanges precludes reliable reference prices for ETNs. As evidence for this claim, the FCA points to price data from an unknown pair or set of exchanges sampled from bitcoincharts.com.

The errors of this paragraph stem from the choice of using Bitcoincharts.com as a source. This source is a seemingly inactive internet website without a physical address, listed contributors, stakeholders or methodologies. The latest news post on the site is over a year old, and the second latest is almost 2 years old. We are not aware of any reputable crypto asset research desk using this source for any outputs.

When surveying the list of exchanges offered by this website, we immediately found dozens of exchanges flagged by third parties such as Bitwise[65] and the Blockchain Transparency Institute[66] as significantly consisting of fake or otherwise non-economic volume. While it is not possible to ascertain if the FCA used fake exchanges as their price difference benchmarks (because the FCA did not source which exchanges they were using), we find it necessary to point out that exchanges with fake volumes cannot be used as reliable price sources. CoinShares does not use any of these exchanges to calculate the reference price for its delta 1 ETNs.

Nor is it possible to know whether the FCA has used Open, High, Low, Close, Median, Mean or any other metric as their price points for calculating spreads. This, combined with their omission of proper exchange sourcing, makes their results impossible to replicate.

The price calculation of the COINXBT and COINXBE ETNs is made on an index basis.[67] Out of a basket of seven vetted exchanges, fair price is calculated as the arithmetic average of the three most liquid exchanges over the preceding 30 days.

Using the COINXBT and COINXBE methodology of fair price calculation for the same calculation over the same time period, shows that the spread across real exchanges is much tighter and in fact less than a third of the FCA's calculations.

We also note that the FCA seems to selectively pick its date ranges as the period for calculating exchange spreads. The chosen period is indeed one of the most volatile 14-day periods in the last 1800-days of Bitcoin price history. While we appreciate that this range gives a nice measure of the worst possible spreads that might arise, it is hardly descriptive of the normal state of spreads and therefore not particularly useful for ascertaining ongoing risks to investors. A data sample of 14 data points is also completely inadequate to make any long-term statistical inferences.

Throughout the FCA's date range used in the CBA, the spread between the exchanges used for ETN fair price calculation has a median spread of 0.51% and a mean spread of 1.3%, versus a median spread of 4.0% and mean spread of 4.5% between the FCA's exchanges and over their chosen 14-day period. Our figures were calculated over 911 daily data points, making our analysis far more statistically relevant than the FCA's analysis.

Our analysis also showed that between June 2017 and June 2018, the mean spread between the exchanges used for ETN fair price calculation was 1.42% and the median was 0.63%. Over the period between June 2018 and June 2019, the mean spread had fallen to 0.86% and the median to 0.19%.

The large difference between the median and mean values over the entire CBA time range also demonstrates that relatively infrequent episodes of large spreads do happen but are not the normal state of the market. As one would expect, episodes of increased spreads generally coincide with volatility events.

We do appreciate that these exchange spreads are indeed higher than those that can be observed between the most liquid FX markets, but trade volumes in FX markets were also more than 1,000x larger over the same period,[68] so we find the comparison to be of questionable relevance.

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[65] **Hougan, Matthew, et al.** *Economic and Non-Economic Trading In Bitcoin: Exploring the Real Spot Market For The World's First Digital Commodity* [Online] May 2019. https://www.sec.gov/comments/sr-nysearca-2019-01/srnysearca201901-5574233-185408.pdf

[66] **Blockchain Transparency Institute**. [Online] September 2019. https://bti.live

[67] **XBT Provider**. [Online] May 2019. https://xbtprovider.com/assets/documents/xbt-prospectus-(english-approved)-v15---website.pdf

[68] **Euromoney.** [Online] 2018. https://www.euromoney.com/Media/documents/euromoney/surveys-and-awards/fx/EuromoneyFX2018ResultsPresentation.pdf

Furthermore, we find it necessary to point out that relevant data on four of our vetted exchanges, Bitfinex, itBit, GDAX and Gemini — all among the largest Bitcoin exchanges in the world — are not currently offered by the FCA's source website (it does have limited historical information on some of them). So not only does the FCA's source include dozens of fake exchanges, it *does not* include adequate data on several of the world's largest *real* exchanges. This further supports our argument that the sources used to support the FCA's arguments are not of appropriate quality.

It is also important to note that comparing spreads between crypto assets and legacy markets is of limited relevance due to fundamental differences in market structure. In legacy equity markets for example, there are central clearing systems which enable near-perfect, cross-exchange arbitrage. This is not the case in crypto asset markets where assets are disjointly held across a variety of unconnected exchanges.

Even so, spreads are reducing across crypto exchanges (as shown by our numbers above), and new systems are being introduced with the goal of reducing settlement friction even further and enable continued efficiency gains in the market. Such improvements include the AIS-like model envisioned by Bakkt — the Bitcoin-focused joint-venture launched by Microsoft, Starbucks and Intercontinental Exchange[69]— and fiat- and crypto-pegged side-chains such as Blockstream's Liquid[70].

Academic studies have also pointed out that the global nature of crypto assets causes price premiums to form between western countries with relatively high-functioning financial systems free of capital controls and countries with weaker financial systems and active capital controls.[71] They further argue that the very existence of such capital controls effectively reduce the efficient use of arbitrage capital.

Finally, we note that the CME offers a standardised reference rate and a spot price index for Bitcoin prices, both of which are registered benchmarks under European Benchmarks Regulation.[72] We believe the existence of such regulated pricing mechanisms strongly contradicts the FCA's assertion that there are no reliable reference prices for ETNs.

- *We therefore disagree with the FCA that Bitcoin exchange spreads means that ETNs cannot be assured of a reasonably reliable reference price. This is demonstrated by showing that the FCA's calculations are faulty and based on sources of inappropriate quality, and by showing that when spreads are calculated using the correct method — and over an appropriate time period — of ETN pricing, the median spread is around 0.5% — a relatively low value given the volatility and average returns of the instruments.*
- *We agree that exchange spreads were significant in the earlier days of crypto asset exchange history but note that these spreads are collapsing as new technologies and more efficient arbitrage strategies have been implemented by traders. As such, we consider it inappropriate to use an outdated state of a rapidly improving metric to justify wide-reaching intervention into innovative and evolving new markets.*

Q2: Do you agree with our proposal to prohibit the sale, marketing and distribution of CFDs, futures, options and ETNs referencing relevant crypto assets to retail consumers?

CoinShares believes it is inappropriate to include delta 1 ETNs in the FCA's proposal to ban CFDs and derivatives due to their fundamentally different risk profiles and investment characteristics. Both the structural and payoff profile risks of these two product categories differ dramatically. We believe the investors are different as well.

Structurally, ETNs are regulated products, listed on recognized exchanges, traded through regulated brokers and subject to the extensive disclosure and transparency requirements required by the Prospectus Directive and other regulations governing listed securities. Practically, this means that ETN providers have to publish a prospectus and to engage frequently with member state regulators and listing authorities where the products are listed and/or passported. Most derivatives, and in particular CFDs, on cryptocurrencies are not subject to the same level of regulatory scrutiny.

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[69] **Bakkt.** [Online] 2019. https://www.bakkt.com/

[70] **Blockstream.** [Online] 2019. https://blockstream.com/liquid/

[71] **Makarov, Igor and Schoar, Antoinette.** [Online] December 2018. http://www.lse.ac.uk/fmg/assets/documents/papers/discussion-papers/DP782.pdf

[72] **CME Group.** [Online] September 2019. https://www.cmegroup.com/trading/cryptocurrency-indices/cf-bitcoin-reference-rate.html

The differences are even more dramatic with respect to the risks associated with the payoff profile. CFDs and other derivatives involve (at times, significant) leverage and trading on margin, both of which can lead to outcomes that are not only unfavourable but also unexpected. Delta 1 ETNs, however, do not give rise to similar risks.

Finally, we note that much of the current proposed ban on cryptoassets seems to have developed as an extension of the more general investigations of the risks associated with CFDs. We note that both the FCA and ESMA have been focussing supervisory supervision work over the last 18 months on the marketing and distribution of CFDs and related derivatives to retail investors.

No such independent reviews were deemed necessary with respect to the circa $30bn ETN market in Europe, primarily because it is clear that market does not give rise to the same investor protection concerns. We note that none of the risks delineated in Section 2.10 of the proposal are pertinent to ETNs. As a result, we strongly disagree with the FCA's statement that: "[Delta 1] ETNs pose similar risks to derivatives on tokens," and we believe a ban on ETNs should be considered separately from a ban on investor products that involve leverage, margin trading and are issued under an entirely different regulatory framework.

- *We strongly believe the FCA should not consider a ban on delta 1 ETNs and leveraged products simply because they reference the same asset. The two product categories encompass distinct structural and market risks. Rather, delta 1 ETNs referencing crypto assets should be considered in the context of the wider ETN market in Europe*

In paragraphs 3.24 - 3.29 the FCA makes note of the large volatility in crypto assets and argues that this is atypical and inappropriate for listed assets. Furthermore, the FCA also notes the relatively high fees associated with listed assets referencing crypto products as well as a purported inability on the part of the UK retail community to understand such assets.

We note that there are hundreds of ETNs in the European market, many of which involve leverage (up to 5x) on such volatile assets as oil and natural gas. We also note that there are delta 1 ETNs on such complex assets as rhodium and EU carbon credits. We provide a comparative list below of a small sample available to retail investors below:

Table 1. Performance as of 19 September 2019 and Ownership Cost Comparison Between CoinShares ETNs and Comparable Competitor Products.

Ticker	1y Perf.	1y Sharpe Ratio	3y Perf.	3y Sharpe Ratio	360d Volatility	MER*	TCO**
XFRD	87.1%	2.60	488%	2.23	70.1	0.95%	0.95%
COINXBT	73.6%	0.97	1,746%	2.21	52.7	2.50%	2.50%
COINXBE	70.7%	0.87	1,559%	1.91	54.2	2.50%	2.50%
CARB	21.7%	0.33	430%	1.55	40.1	0.49%	1.49%
3BRL	(56.1%)	(0.53)	14.4%	0.058	95.9	0.98%	2.58%
3NGS	(78.5%)	(0.61)	(79.8%)	(0.39)	122	0.99%	3.18%
3OIL	(66.0%)	(0.63)	(30.9%)	(0.15)	156	0.99%	2.63%
SG27	(99.8%)	(0.43)	N/A	N/A	310	0.90%	2.99%
SG28	(92.3%)	(0.52)	N/A	N/A	172	0.90%	2.99%
SG40	(45.3%)	(0.62)	N/A	N/A	94.5	0.90%	2.99%
SG41	(22.1%)	(0.25)	N/A	N/A	93.9	0.90%	2.99%
SG42	157%	2.91	N/A	N/A	49.6	0.90%	2.99%
SG43	(68.6%)	(1.26)	N/A	N/A	54.0	0.90%	2.99%

* MER means management expense ratio (annualised).

** TCO means total cost of ownership (annualised).

As the table shows, there are a number of ETNs that are both more volatile and have a lower Sharpe Ratio than our ETNs referencing crypto assets. In particular, highly leveraged products on commodities such as natural gas and oil pose similar volatility risks but are not being considered in the context of any retail ban. Furthermore, with fees well over 2%, many of these products are as costly as delta 1 ETNs on crypto assets. Furthermore, while we understand the FCA's concerns about investors' ability to understand crypto assets (given, in particular, how novel the industry is), we do not believe any investor has any better ability to understand the pricing fundamentals of, for example, rhodium or EU carbon credits.

It is true that crypto assets are volatile, but looking at volatility in the absence of returns is unconventional and inappropriate when assessing investments because returns and volatility are generally closely related. A common method of assessing risk and returns in investment management is using the Sharpe Ratio — a risk-weighted metric of returns.

Since inception and as of 27 September 2019, COINXBE has returned 3,838%. Its monthly average compound return (calculated over 47.9 months from inception) has been 8.0%, and its annual average compound return (calculated over 3.98 years) has been 152%. With returns of such magnitudes, it is mathematically impossible to simultaneously achieve low price volatility.

Furthermore, we have conducted portfolio analysis research to compare a number of portfolios to investigate how adding a 2% fixed-weight allocation to Bitcoin via COINXBE ETP can impact overall performance and important metrics like Sharpe Ratio in multi-asset portfolios.

To construct our model portfolios we used a series of five suggested compositions from the MSCI WMA Private Investor Index Series sourced from the Personal Investment Management and Financial Advice Association (PIMFA) website. These portfolio suggestions are created to fit five typical investment goals: Conservative, Income, Balanced, Growth, and Global Growth[73].

For all portfolios a 3 year allocation of a small (2%) amount of COINXBE resulted in significantly improved portfolio return. Additionally, as indicated in the comparisons, the portfolios with the 2% weighting to COINXBE generally have slightly lower draw-downs, slightly higher volatility, and significantly higher Sharpe Ratios. To be clear, the numbers listed in Table 2 are absolute changes, not relative percent changes.

Table 2. Changes in Portfolio Metrics After Inclusion of a 2% COINXBE Position to a Set of Common Portfolio Structures

Portfolio*	Return (An.)	Drawdown	Volatility	Sharpe Ratio (An.)
Global Growth	12.7%	(0.88%)	0.29%	0.33
Growth	14.0%	(0.44%)	0.31%	0.40
Balanced	13.7%	0.10%	0.41%	0.45
Income	13.4%	(0.14%)	0.48%	0.48
Conservative	13.1%	(0.69%)	0.62%	0.55
Average	13.4%	(0.24%)	0.42%	0.44

*2% COINXBE is substituted equally for all portfolio constituents.

- *We therefore disagree with the FCA's assessment that the volatility in crypto asset prices makes them inappropriate as underlying assets to listed products. Our conclusion is based on the dual facts that many currently listed products are more volatile than e.g. Bitcoin, and that the risk-weighted returns of both Bitcoin and our COINXBT and COINXBE products is superior to almost every single other tradeable asset. The total returns over time of our COINXBT and COINXBE assets also make it mathematically impossible for their price to achieve low volatility.*

Q3: Do you have any comments on the draft Handbook rules and definitions we propose to achieve our policy intention?

[73] **PIMFA.** Current Asset Allocation. [Online] July, 2019. https://www.pimfa.co.uk/private-investor-indices/current-asset-allocation/

Given our belief that it is inappropriate to include delta 1 ETNs in this proposed ban, the following amendments should be made to the proposed Handbook amendments:

1. delete proposed Glossary definition of "crypto asset exchange traded note";
2. delete words "and crypto asset exchange traded notes" in proposed COBS 4.7.6B, 22.5.5A, 22.6.1(1), 22.6.1(2), 22.6.2, 22.6.4, 22.6.5(1)(a), 22.6.5(1)(b) and 22.6.5(1)(c);
3. delete words "crypto asset exchange traded note" from title COBs 22.6.

Q4: Do you have any comments on our CBA for these proposals as detailed in Annex 2?

On a general basis we note that while the FCA contacted some industry firms to gather data as a part of their CBA, this information gathering did not extend to its assessment of cryptoasset valuations, available uses for cryptoassets, or Bitcoin exchange spreads.

We also have several comments to specific sections of the CBA:

In paragraph 11 of the CBA, the FCA notes that "there have been short-term periods of (high) net profits from some products, in particular for a small number of retail clients investing in ETNs", but then goes on to make the claim that they "do not consider a positive outcome over time is likely to be sustained." We do not believe the FCA should be in the business of trying to forecast investment outcomes. Furthermore, we note that the FCA's prediction contradicts the current evidence. Since inception and as of 27 September 2019, our two delta 1 ETNs on Bitcoin have returned 3,941% and 3,838%.

According to our estimates, CoinShares ETNs have returned significant profits for our noteholders since their inception. Between all four products with significant AUMs, we estimate total accrued profits of £290 million.

Table 3. Estimates of total Returns Accrued to CoinShares ETN Noteholders Since Inception

Instrument	Total P/L on AUM	Total Return Since Inception
COINXBT	£ 213,634,266	3,941%
COINXBE	£ 140,023,433	3,838%
COINETH	-£ 28,315,058	-57%
COINETE	-£ 35,400,989	-49%
Sum	**£ 289,941,653**	

In paragraph 16 of the CBA, the FCA lays out its expected monetary benefits of its proposed ban. We would like to point out that while CFDs and futures may be loss-making for investors on the aggregate (there exists no way for us to validate these claims as the FCA does not publish the source data of their estimates), delta 1 ETNs were extremely profitable over the FCA's chosen period.

CoinShares believes that the FCA cost-benefit analysis contains numerous faulty assumptions, errors and unreliable data sources. As a result, we believe the FCA needs to revisit its calculation of the purported benefits to UK consumers from ban on delta 1 ETNs.

In particular, the time period selected for analysis by the FCA ends at the end of Q4 2018 whereas their report came out in Q3 2019. This omission of two whole quarters worth of price information seriously impacts calculations of profits and losses among ETP investors.

In Table 1 of Annex 2, the FCA also lists ETP 'Total Losses (per annum)' at £24.2m while strangely neglecting to list that the Net Aggregate Gains (per annum) of ETPs would be £78.2m. We show XBT ETN performance on a Year-to-Date, 1yr, 3yr and Since Inception timeframe in the table below:

Table 4. XBT Provider ETN Performance (27 September 19)

Ticker	Year-to-Date	1 Year	3 Year	Since Inception
COINXBT	119%	30%	1,244%	3,941%
COINXBE	119%	30%	1,250%	3,838%

The same paragraph also pinpoints the massive difference in fees between e.g. CFDs and ETNs. So not only have ETNs created aggregate profits overall, but ETN fees paid by consumers are also only a fraction of those paid by CFD consumers.

- *We therefore argue that it is inappropriate to treat derivatives and CFDs as equally risky as ETNs when they have historically performed much better than others, especially given the context of the difference in structural transparency, disclosure requirements and comparative fees.*

Finally, in paragraph 19 of the CBA, the FCA again makes the claim that 'hard fork' events cause losses to investors. As we have shown above, in the case of the sole material hard fork event for Bitcoin, investors saw gains and not losses.

Q5: Do you agree with excluding derivatives on security tokens and tokens that meet the definition of e-money? If not, please explain why.

Yes, we agree with the proposal to exclude the tokens described from the proposed prohibition.

Q6: Do you agree with our proposed approach to funds? If not, please explain why.

We do not have any particular comment on the proposed fund exclusion except to note that the FCA should provide, as soon as possible, additional detail on its expectations and requirements for listing transferable securities referencing exchange tokens. The current reference to "the integrity of the underlying market" is too vague to be of assistance to product providers.

Q7: Do you agree with our proposed scope to exclude non-retail consumers from the prohibition? If not, please explain why.

We strongly urge the FCA to allow investment by retail investors into delta 1 ETNs. Having said that, we also agree with the proposal to exclude non-retail consumers from the prohibition.

Q8: Do you agree with our conclusion that alternative options would not sufficiently address the harm? If you disagree, please indicate any preferred option(s) and how it would better address the harms we have identified in a proportionate manner.

We believe that a ban on authorised firms providing leveraged exposure to cryptoassets is more than sufficient to address the harms, while an exception for delta 1 ETNs would improve investor protection in this rapidly growing area.

We noted that the FCA appears to have the view that "authorisation may give retail investors a false sense of security" (see paragraphs 3.55 and 3.58 of Chapter 3 of the Consultation). We strongly disagree with this logic. We believe that firms should be regulated; otherwise how do consumers distinguish legitimate firms from scams and frauds?

Finally, we believe the FCA can better protect investors by implementing heightened requirements around suitability and appropriateness for investors looking to access delta 1 exposure via regulated products such as ETNs.