Statement of Börse Stuttgart

A ban on derivatives referencing cryptoassets is inappropriate to protect retail investor interests. Further regulation can reduce risks – measures should be balanced in order to foster innovation

Börse Stuttgart does not agree with the FCA proposal to prohibit the sale, marketing, and distribution of CFDs, futures, options, and ETNs referencing cryptoassets to retail investors.[1] We do not see sufficient evidence for the risks described by the FCA: Various academic studies show that cryptoassets do have a fundamental value. The definition simply differs from traditional assets due to their unique properties. We believe that further regulation and guidelines can reduce risks associated with financial crime, market abuse and operational issues. Overall, regulation should be balanced in order to foster innovation. High volatility in prices of cryptoassets are no reason to ban derivatives on cryptoassets. We document that some FTSE 250 stocks show similar day-to-day price changes as bitcoin. Investors benefit from cryptoassets since they allow for portfolio diversification and pose a valued investment opportunity. The analyses in the FCA consultation paper exhibit evident shortcomings – a ban cannot be justified given the applied methodology.

Comparable to investments in all kind of instruments, also cryptoassets come along with risks, but there are also opportunities for all types of investors alike. Therefore, retail investors need to be able to invest in cryptoassets through derivatives which offer a higher level of investor protection than the underlying(s) itself. Due to the decentralized nature of cryptoassets, there is no dependence on a central authority and therefore there exists no single point of failure. Cryptoassets might reduce transaction costs for (international) bank transfers significantly (Iansiti & Lakhani 2017) and enable innovation, as well as more flexible technology (Adhami et al. 2018).

Börse Stuttgart does not agree with the FCA analysis of the key risks and harm as explained in the following:

Cryptoassets do have a fundamental value – the definition simply differs from traditional assets due to the unique properties of cryptoassets

Under point 1.5 (page 3 of the consultation paper) it is stated that cryptoassets "have no inherent value and so differ from other assets that have physical uses, promise future cash flows or are legally accepted as money." First, Börse Stuttgart notes that the physical use of gold strongly undershoots its valuation and would, similar to cryptoassets, fall short based on the quoted definition, since the valuation of gold dramatically exceeds its physical use. Börse Stuttgart argues that for these types of assets, another form of fundamental value exists. While there is evidence that cryptoassets differ from existing assets and might represent a new asset class (Burniske & White 2017; Corbet et al. 2018), there are several research papers (e.g., Bolt & Van Oordt 2016; Biais et al. 2018; Pagnotta & Buraschi 2018) of renowned scientists, which outline that bitcoin and cryptoassets do have a form of fundamental value. The fundamental drivers of cryptoassets are thereby elements that drive transactional benefits, for instance consumer adoption and merchant acceptance (Bolt & Van Oordt 2016; Pagnotta & Buraschi 2018; Biais et al. 2018), costs incurred by owners (e.g., through hacks) (Biais et al. 2018), risk and censorship aversion (Pagnotta & Buraschi 2018), transaction value in virtual currency (Bolt & Van Oordt 2016), expectations of investors (Bolt & Van Oordt 2016), and industrial organization of the mining market (Pagnotta & Buraschi 2018).

A multitude of merchants accepts cryptoassets – and the acceptance rate is increasing stately

Under point 3.11, it is stated that cryptoassets are not widely accepted. Börse Stuttgart does not agree with this statement. There is a growing number of companies that accept payments in bitcoin, for instance, Microsoft, Wikipedia, and AT&T (99 bitcoins, 2019a). Furthermore, via bitcoin debit cards (99 bitcoins, 2019b), it is possible to indirectly pay with bitcoin at all stores that accept payments via debit cards.

Further regulation and guidelines can reduce risks – fostering innovation should be balanced with an appropriate set of rules

Under point 1.5 (page 3 of the consultation paper) it is

[1] Extract from Börse Stuttgart's response to the FCA Consultation Paper (CP19/22) "Restricting the sale to retail clients of investment products that reference cryptoassets", Link.

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stated that there is “presence of market abuse and financial crime (including cyber thefts from cryptoasset platforms) in the secondary market for cryptoassets.” Börse Stuttgart argues that policymakers and regulators need to address existing problems, e.g. by further regulation and guidelines that aim to prevent financial crime related to cryptoassets. The resolution of the Fifth Anti-Money Laundering Directive, as stated by the FCA, will help to reduce money laundering risks associated with the anonymity of cryptoassets. The reduction of crimes in connection with cryptoassets through new rules and guidelines demonstrates that regulators can sufficiently address risks from financial crime, market abuse, and operational issues.

Börse Stuttgart would welcome further regulation of secondary market trading of cryptoassets, including transparency, custody, clearing & settlement, trading itself and cyber security & systems integrity. The secondary market for cryptoassets is still relatively young, and it is essential to strengthen investor protection. We believe that IOSCO’s Consultation Report (2019) provides useful toolkit of possible measures that should be used to address the underlying risks. Börse Stuttgart further notes, that the blockchain technology itself is very transparent and secure and former cryptoasset hacks mainly exploited weaknesses in handling the blockchain (e.g., online wallet access). This should be considered when providing guidance for safekeeping of participant assets, including custody arrangements.

Börse Stuttgart strongly believes that issuers of derivatives on cryptoassets should ensure that their benchmarks are robust, reliable, representative and fit for purpose and that they are not subject to manipulation. This requirement would lead to a competition between secondary trading venues of cryptoassets based on high regulatory standards in order to qualify as venue for reference prices. We therefore propose to enforce standards as defined in the Benchmark Regulation to derivatives on cryptoassets.

High volatility in prices of cryptoassets are no reason to ban derivatives on cryptoassets – some FTSE 250 stocks show similar day-to-day price changes.

Under point 1.5 (page 3 of the consultation paper) it is stated that cryptoasset prices exhibit extreme volatility. The FCA is concerned that retail investors might experience sudden and substantial losses. Börse Stuttgart believes that high volatility of the underlying is not a reason to ban derivatives on that underlying. There are many stocks that exhibit similar price fluctuations to bitcoin. Figure 1 shows the day-to-day price changes of bitcoin and the shares of Hochschild Mining, Highland Gold Mining LTD, and KAZ Minerals since April 2013. The average relative day-to-day price changes since April 2013 for bitcoin, Hochschild Mining, Highland Gold Mining LTD, and KAZ Minerals are thereby 2.7%, 2.6%, 2.7%, and 2.7% respectively. Bitcoin exhibits average relative

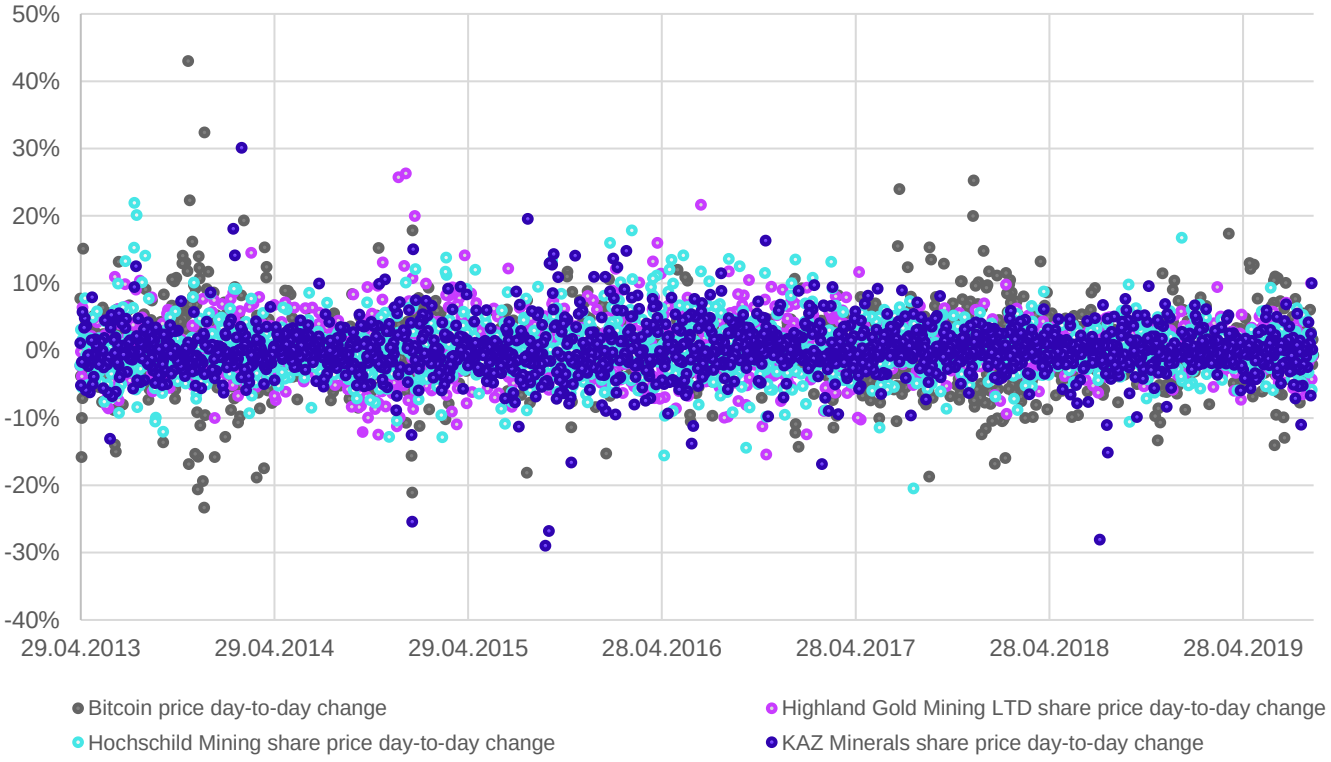

Figure 1: Some FTSE 250 stocks show similar day-to-day price changes compared to bitcoin

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day-to-day price changes of 2.7% in the same time window. KAZ Minerals and Hochschild Mining are part of the FTSE 250 Index, and we are not aware that there is any discussion over banning derivatives on shares of specific companies.

Functionality of most cryptoassets is straightforward – cryptoassets allow for portfolio diversification and pose a valued investment opportunity

Börse Stuttgart does not agree that private investors understand cryptoassets less than other asset types. The functionality of most cryptoassets is straightforward compared to many other assets, and there exists – to our knowledge – no study that supports the claim that private investors have a lower understanding of cryptoassets, compared to other asset types. We acknowledge that portfolio diversification constitutes a clear investment need for derivatives on cryptoassets. According to basic financial theory, any limitation of the investment universe leads to lower diversification possibilities and hence to a lower risk-adjusted portfolio performance.

Competition holds fees to an efficient level – several issuers compete for customers

Under point 3.34, it is stated that high fees reduce the likelihood of retail consumers achieving positive returns over time. These fees primarily reflect the costs for the firms' hedging or purchasing of cryptoassets to support the clients' exposures. While these costs are higher for cryptoassets compared to other assets, Börse Stuttgart witnessed competition between different issuers which should hold fees at an efficient level.

The cited analyses in the consultation paper exhibit evident shortcomings – a ban cannot be justified given the applied methodology

Under point 3.15, a "noise analysis" is conducted and a high correlation is found between Google searches and cryptoasset prices. The FCA states that this finding suggests the effects of tweets on social media sentiment and pricing. First, this interpretation exhibits a serious causality problem. It is not clear whether higher prices lead to higher search volumes on Google or higher search volumes on Google lead to higher prices. Second, Google search volume is only a weak proxy for Tweets and sentiment from influencers. If the goal is to analyze the effect of Twitter influencer sentiment on bitcoin prices, the sentiment should directly be determined from Twitter data, and the resulting features should be lagged to offset a part of the mentioned causality problem.

Furthermore, under 3.12, the classical quantity theory of money is used to determine bitcoin prices. It is shown that different analysts use very different input values for velocity (V) and value of purchases (P) and hence arrive at very different bitcoin valuations (Y). Börse Stuttgart believes that these findings are driven by a very different choice of input parameters. The difference in currency supply (M) also shows that the two analyses have been conducted at different points in time. Börse Stuttgart argues that the classical quantity theory of money cannot be used to value a relatively young asset like bitcoin, due to the dynamic environment of bitcoin and a rapid change of velocity (V) and value of purchases (P). Therefore, the cited concern about the 400x difference in valuation solely shows that the selected pricing model is not suitable for the chosen prediction problem at this point. As stated before, research also indicates that cryptocurrencies might constitute a new asset class, and therefore new and unique valuation models need to be developed. Additionally, the linked article about the analysis by Jackman & Savouri does not meet academic standards. An article that starts with the phrase "It took two economists one three-course meal and two bottles of wine to calculate the fair value of one bitcoin: $200. It took an extra day for them to realize they were one decimal place out" should not be used as justification for a far-reaching regulatory intervention as a product ban.

Under the same point, the FCA notes that certain exchange tokens are of limited supply, while others are of potentially unlimited supply. Based on this, the FCA argues that exchange tokens are substitutable and therefore, the value of any single currency will fall to zero over time. Börse Stuttgart strongly disagrees with the statement that all exchange tokens are substitutable. There are apparent technological differences (e.g., consensus mechanisms, technological setup) and network-related differences (e.g., acceptance by merchants, networks size) that make an exchange token unique. Additionally, technological and network-related characteristics interact with each other, for instance, the combination of the current consensus mechanism of bitcoin, proof of work, and bitcoin's large network size leads to a high network security.

The cost-benefit analysis in Annex 2 exhibits several methodological shortcomings. First, all costs are considered as gross costs. However, the losses of some are the profits of others. The fees charged by the providers are a benefit (revenue for the providers), the same as the cost block on the customer side. Therefore, the net effect is zero from an economic point of view. Of course, one can take a business cost view of the customers, but then one must not call the analysis "cost-benefit analysis". Second, the focus is only on costs, and the main

benefit is only mentioned qualitatively in one place: potential profit. Profits, however, are an essential - and easy to quantify - benefit parameter. Third, additional benefits, for instance price discovery or higher market efficiency, are neglected. Fourth, the representation in Chart 4 is one-sided. One would have to make the same graph with the concentration of losses - and it would also be more sensible to control for trading volume (i.e., to look at the return and not at absolute amounts).

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